A PLANNING STUDY
KINGSTON, ONTARIO
1960

A PLANNING STUDY OF KINGSTON, ONTARIO

PREPARED FOR THE CITY COUNCIL

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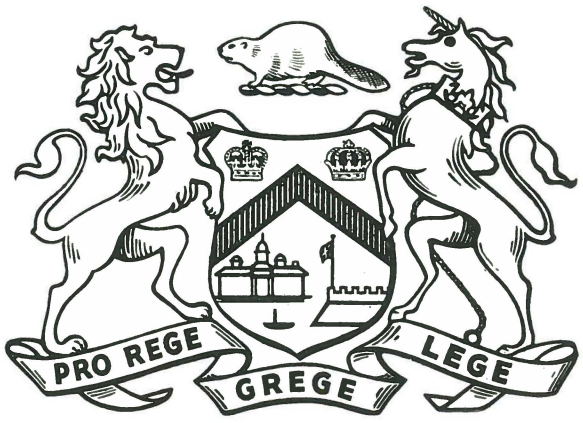

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FOREWORD

by HIS WORSHIP, WILLIAM T. MILLS
Mayor of the City of Kingston

THE CITY of Kingston is a unique blend of past and present. Stately old buildings, many of them reposing in parklike settings, have given it the name of "The Limestone City". Well designed industrial plants, shopping facilities and pleasant new subdivisions mark it as a progressive, modern city as well. It is also a great military, medical and educational centre. Historically, it has been an important port. Now a century and a half old, the structure of our City has undergone a process of continuous change as it has adapted itself to new conditions. The demands of the 20th Century however, have imposed new strains on the structure of the City which must be reshaped if it is to continue to function efficiently. Certain parts of the fabric are wearing out and must be replaced. Other parts show signs of deterioration which must be halted. Some areas have been allowed to become ugly; their beauty must be restored. This process of improvement is called Urban Renewal and it has but one justification—the enhancement of the general welfare of the people of Kingston. The Kingston Urban Renewal Study, which has been prepared by Professor Gordon Stephenson and Mr. George Muirhead indicates the lines along which such improvements should take place. I warmly commend the reading of this Report to all our people.

WILLIAM T. MILLS
Mayor

City Hall, Kingston

PREFACE

On December 13, 1955, a Committee on Housing was appointed by the late Mayor George Clark Wright to enquire into the housing situation in the City of Kingston. The Committee held its first meeting on December 20th, 1955 when it was decided to give priority to the matter of clearance or redevelopment of substandard housing in Kingston and to low cost housing projects for the City, including a scheme with subsidized rentals. On January 4th, 1956, it was resolved that a city-wide survey should be made to determine the location of substandard housing in the City, beginning with Weller Avenue and continuing through the Rideau Heights Area. As the Housing Committee's survey progressed it became increasingly evident that the Rideau Heights district could not be treated as an isolated area and that the realization of redevelopment objectives would have to be integrated with the planning of the entire city. Consequently, the Housing Committee and the Planning Board cooperated to urge an Urban Renewal Study of the whole City which would endeavour to solve the interrelated problems of replanning the old sections of the City and remedying unsatisfactory housing conditions.

Also, at about this time and at the request of the Housing Committee, a Housing Needs Survey was carried out by the Ontario Department of Planning and Development. The Survey resulted in a proposal for a low-cost housing project for the City of Kingston, and preparations for this began late in 1958. A site in Rideau Heights was chosen on which 71 units of public housing will be constructed, beginning in 1960.

The present Study has been carried out under the general supervision of the Urban Renewal Advisory Committee, consisting of Mr. J. F. Brown, Community Planning Branch of the Department of Municipal Affairs (Chairman); Mr. D. Taylor, Community Planning Branch of the Department of Municipal Affairs; Mr. J. McCulloch, Regional Administrator, Operations, Central Mortgage and Housing Corporation; Mr. P. Dovell, Ontario Regional Architect, Central Mortgage & Housing Corporation; Mr. K. Ganong, Manager, Central Mortgage & Housing Corporation, Kingston; Aldermen R. Bruce and O. A. Earl (1958): Aldermen G. Vosper and F. D. Stevens (1959-60). The Committee held its first meeting in June, 1958 while actual work on the Study commenced in May, 1958.

Mr. John Billingham, Dip. Arch., A.R.I.B.A., a graduate in Town and Regional Planning of the University of Toronto, was engaged full time on the Study from May, 1958 to September, 1959. We are greatly indebted to him for his unfailing energy and consistently good work. He has been ably assisted by Mr. K. Grace, Mr. R. Ollerhead and Mrs. E. MacMaster, members of the City Planning Office Staff. Mr. K. Grace was responsible for the organization of work for the printer after Mr. Billingham's departure.

It would be impossible to mention by name all those persons who have given of their time and interest in the preparation of the Study although it is with a real sense of obligation that we acknowledge their contributions. There are some, however, whose assistance was especially helpful and we record their names with gratitude.

Mayor Frank Boyce, in 1958, and His Worship Mayor William T. Mills, in 1959, have aided the survey of internal housing conditions by informing all residents within the Study Area by circular letter of the purpose of the survey. Mayor Mills has shown continuous interest in the study and has joined in discussions about it several times. Mr. B. G. Allmark, M.P., the Federal representative and the Honourable W. M. Nickle, Minister of the Department of Planning and Development of Ontario, have shown great interest from the beginning. The City Planning Board have been most helpful in arranging meetings with different individuals and groups in the City for discussions about ideas as well as facts. Various Departments of City Hall have helped in compiling this Report. The records of the Assessment Department were made available, and Mr. H. O. Morris, the Commissioner, and his staff have been most cooperative. Through Mr. N. J. Robinson, the Welfare Administrator, and Mrs. S. Buck, the Relief Supervisor, the records of the City Welfare Department have been open to us. Mr. R. Tear and Mr. H. E. Bishop, Probation Officers for the Juvenile Court, allowed us to use a number of their records for the Study. On several occasions we have consulted with the Engineering Department, particularly with regard to road proposals and sewage disposal requirements for the City.

Mr. D. Bruce, Building Inspector, has assisted us with surveys in the Rideau Heights Area. Fire Chief V. C. Brightman made available the records of his Department for the past five years. Inspectors P. L. Rapley and G. K. Ball of the Fire Department

were assigned to help during the early stages of the survey of the interiors of dwellings. Police Court Records were made available by the late Police Chief J. T. Truaisch and his successor Police Chief R. Nesbitt. Detective Inspector R. E. Haunts kindly took a number of photographs which appear in the Study. Dr. R. A. Kelly and his staff at the Department of Health helped us to investigate tuberculosis cases, infant mortality and other health records. Mr. R. McPherson, the Sanitary Inspector, made it possible for us to enter some of the downtown residential dwellings. Colonel L. F. Grant, an Alderman of the City, was able to make valuable suggestions relating to the Harbour and Waterfront. Lieut. Commander E. Phipps-Walker, the Harbourmaster, helped with information on the present use of the Harbour. Mr. C. Hudson and other members of the Chamber of Commerce provided photographs and information for the Study and publicized Planning Board meetings arranged for the Downtown Merchants. We are grateful to the members of the Parking Authority for their interest in our proposals, some of which have already been adopted. Messrs. H. Abramsky, R. Bruce and S. Goodman, among other downtown merchants, have helped with suggestions for the Central Area.

With the aid of Dr. Lamb, considerable historical information was obtained from the Public Archives of Canada. Dr. R. Preston of the Royal Military College has been kind enough to provide information from his own files, and to offer comments on the historical section of this Study. Mrs. W. Angus of the Kingston Historical Society has helped with information and opinions, and the Librarians at Queen's University and the Public Library have helped in the search for historical maps. The Editors of the Whig-Standard have made the Urban Renewal Study the subject of numerous articles and talks. Dr. S. Fyfe and Professor D. Slater of Queen's University discussed with us the economic structure of the Kingston Area, and Dr. Fyfe has written a chapter of the Study for which we are grateful. Details of C.P.R. freight distribution were kindly supplied by Robert Purtell Cartage. Mr. J. D. Lee and Professor H. M. Edwards of Queen's University were consultants to the City on engineering and traffic studies which have been valuable guides.

The internal and external survey of buildings was begun in June, 1958. It was carried out by Mr. Billingham, Miss J. Estall, Mrs. N. Hooper and Miss C. Newell. Miss J. Estall worked for two long periods during the preparation of the Report. Her contribution has been of great value. Mrs. Flora C. Stephenson has also worked at different times on the survey and report. She was an invaluable assistant to the Consultant. Miss M. Seymour's report on land use and zoning in the Old City and Mr. I. MacGregor's report on population have been of use in this Study. We were grateful to have them, and other reports and information which may not have been mentioned specifically.

February, 1960.

GORDON STEPHENSON
G. GEORGE MUIRHEAD

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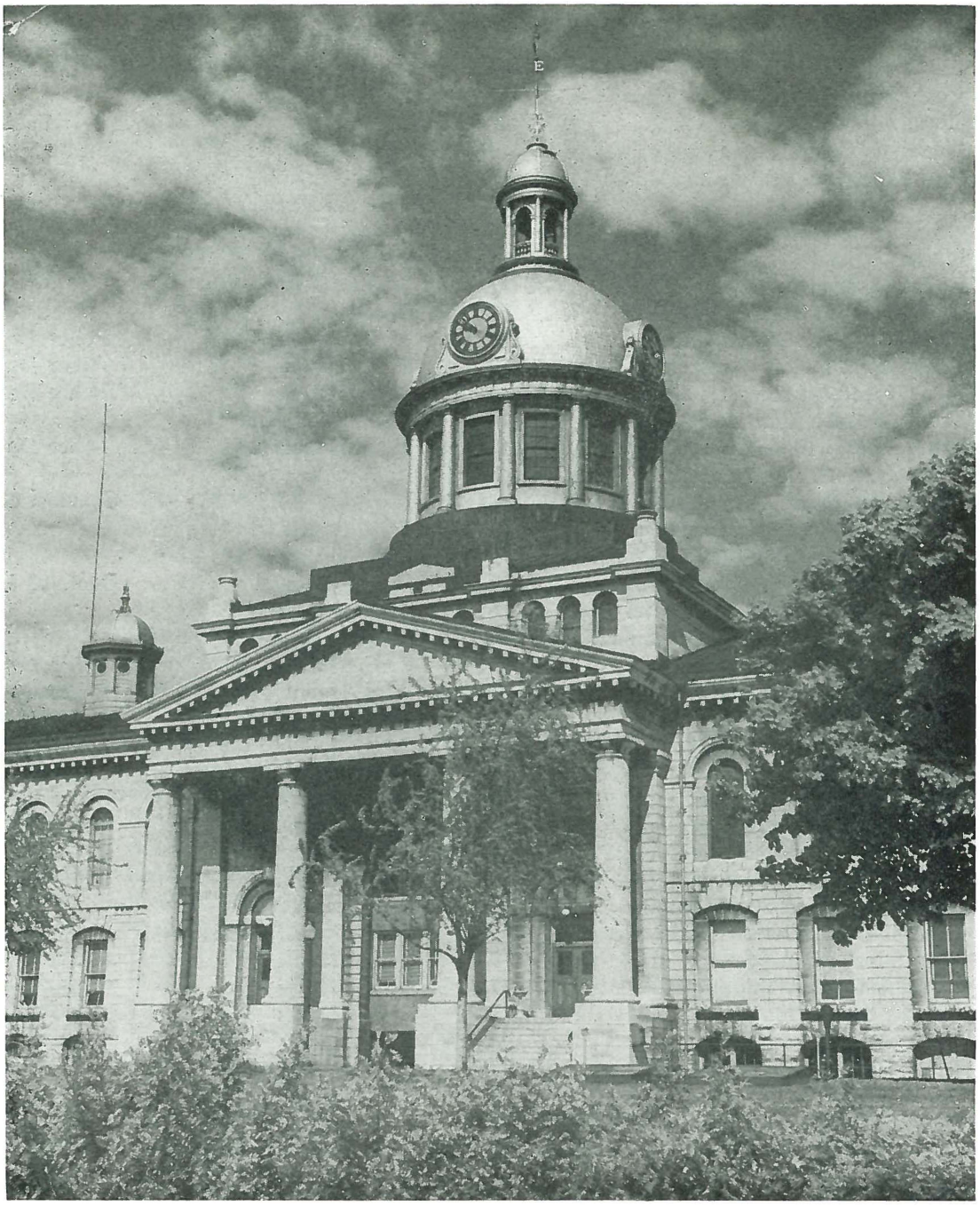


FRONTISPIECE. The City Hall was built during the mayoralty of John Counter when for three years Kingston was the capital of Canada. The cornerstone was laid by the Governor-General, Sir Charles Metcalfe, on June the 5th, 1843, and the building was completed by November the 21st, 1844. The architect was George Browne and the building cost £30,000. Professor A. M. Lower describes it as the most dignified City Hall in Canada, an opinion with which many must agree. The magnificent waterfront view is spoiled by the absence of the portico which was removed in 1956. The restoration of the portico deserves the highest priority in an urban renewal programme in which the old battery site facing the portico on the water's edge should once more become a public park.

I. THE DEVELOPMENT OF KINGSTON

Kingston and its surrounding region have experienced more than three hundred years of history since the arrival of the first white man. Although no urban growth took place for a hundred years, the site was always important, for strategic and trading reasons, to both French and British. The first recorded visit by white explorers took place in 1615. Samuel de Champlain and his party of French explorers spent some thirty-eight days in the vicinity hunting, fishing and exploring. A century later the French wished to push further west with their fur trading and exploration, and in 1673 Cataraqui, as the region was then called, was selected by doughty Count Frontenac for a fort and trading post. He wrote of his expedition that, "with the Naval vessels now being built, it will command Lake Ontario, keep peace with the Iroquois, and cut off trade with the English".

In the next year La Salle was granted the first Seignory of Frontenac by Louis XIV. His grant included the fort, four leagues along the waterfront, one half a league inland, and Wolfe and Amherst Islands. However, La Salle was more interested in further exploration westward than in building up Frontenac as a rival trading post to Montreal. During the years that followed, the fort had various commanders, but after Frontenac's recall there was no firm policy towards trade and relations with the Indians. After the massacre at Lachine in 1689, the fort was partly destroyed and the Commandant withdrew to Montreal with his soldiers. In 1696 Frontenac, now an old man, returned to Canada and rebuilt the fort which had been named in his honour.

Half a century later came the eventful Seven Years' War. The last important occasion on which the post of Frontenac was used to mount an attack against the English was in July, 1756, when Montcalm left it to attack Oswego. Two years later, Fort Frontenac fell to the English under Colonel Bradstreet who destroyed it, using its own guns to batter down the walls. To the French the destruction of Fort Frontenac and their fleet was a major calamity, because it cut off free access to their far western outposts and opened the way for the English victories at Montreal and Quebec.

Cataraqui now became a British outpost and entered a thirty year period of virtual stagnation. In 1760, after the fall of Montreal, a British party formally took possession of the post, but from 1759 to the close of the American Revolution the site was used mainly by a few fur traders and wandering Indians. The American Revolution sparked a new period of development at Frontenac and in Upper Canada. Of the thousands of Loyalists who left the American colonies, some 10,000 came to Lower and Upper Canada. At this time all communications with other parts of Canada were by water; the shores of Lake Ontario were still a trackless wilderness, quite unsettled. From the earliest fur trading days, however, Kingston had been an important site for the forwarding trade, and for this reason was chosen for a Loyalist settlement.

In 1783 orders were issued for a survey of Kingston Township, including reservations for the fort and town-site. In 1784 numerous groups arrived at Cataraqui, soon renamed Kingston, where they underwent considerable hardship for several years. The refugees were issued supplies, tools and clothing but these seemed to have been in short supply or unevenly distributed. Most of the Loyalists took up their land grants in the township, while some artisans and traders settled in the new village of Kingston. Major Holland, the first British official to arrive after the Treaty of Paris in 1783, was in charge of the party who made the survey and prepared plans. His assistant, Ensign Peachey, has left us the only etching of Cataraqui before the Loyalists came. Within ten years all the street lines were projected, and blocks were subdivided in the townsite. The townsite was on land between the waterfront and Sydenham Street to the north of Princess Street. 350 town lots and 20 waterfront lots were laid out, and by 1796 some 75 of the lots had been built upon.

The arrival of the Loyalists marked the first real spurt of growth around Kingston. By 1789 the Naval Dockyards, which had been removed to Carleton Island during the Revolution, were returned to Kingston. Already some shipbuilding yards had returned. A new fort was built and garrisoned, and the presence of many soldiers and sailors, with money to spend, quickened the commercial life of the little town. It was still, however, a small and primitive community. When Governor Simcoe came to Kingston in 1792, Mrs. Simcoe wrote in her Diary: "Kingston is a small town of about 50 wooden houses and merchants' storehouses; only one house is built of stone". In 1800 the town was made a regular Customs port of entry, and in 1801 an Act established a market for the district of Kingston.

Steady progress was made in population and

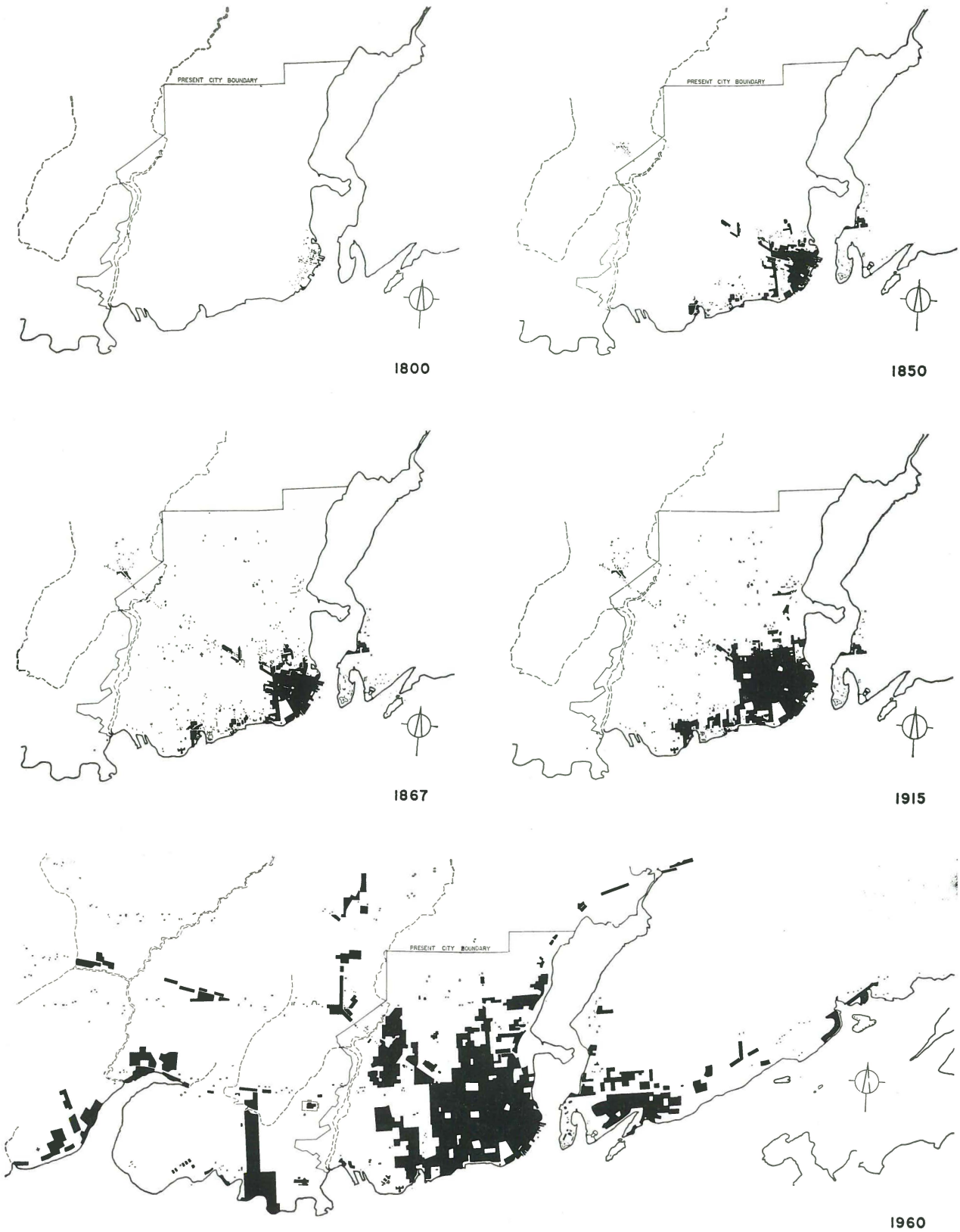


ILLUSTRATION NOS. 4 to 8 INCL.—THE DEVELOPMENT OF KINGSTON FROM 1800-1960.

housing, and the War of 1812 brought more troops, sailors and prosperity to Kingston. During these early years the Loyalist settlement regarded itself as the centre of Upper Canada and looked upon Toronto as a mere upstart. During the War of 1812 the woods around the town and on Point Henry were cut down for protection, five block houses and palisades were built to encircle the town, batteries put up at strategic points, and a stone fort erected on Point Henry. When the War ended in 1814, Newark (Niagara) and York (Toronto), were severely damaged, commercial ruin had come to other places, but Kingston had prospered. Since Kingston was strongly fortified it had not been attacked, and the Naval Dock Yard workers and the soldiers had put money into circulation. At this time there were 450 dwellings, three churches, a government building, a theatre, a newspaper, and a semi-public library in Kingston.

The years following the War of 1812 witnessed steady growth. Slowly the population, commerce, and physical aspect of the city changed and improved. By 1821 Kingston was the largest town in Upper Canada. Communications were also improved. A stage service had existed to Montreal since early in the century, and the discomforts and uncertainty of the journey have been vividly described by early travellers. Now a stage service was started to York, but the distances to both Montreal and Toronto were so great, and the populations involved so small, that it was impossible to maintain good roads and reliable communication by land.

It was the use of steam power in ships that first changed the picture and made the future brighter for Kingston and other settlements on the Lake. In 1815 a steamboat, the "S.S. Frontenac," was commissioned by leading Kingston merchants. It was built at nearby Bath and launched in 1816 for service on Lake Ontario and the St. Lawrence. It was soon followed by others. Ten years later the Rideau Canal was begun, an undertaking which enabled Kingston to maintain her position as a port of transhipment and to develop into a busy town. The Canal was designed with military needs foremost in mind, so that Upper Canada could more easily be protected from the new Republic to the south, but it also stimulated commerce throughout the province. Kingston in particular benefited quickly, because goods, both east and westbound, had to be transhipped at this point. The forwarding trades and shipyards became active and remained so until late in the century. The opening of the St. Lawrence Canals in the 1840's, and the construction of railways in the 1850's, reduced the commercial importance of the Rideau Canal, but wheat from the Bay of Quinte and Western Ontario continued to be trans-shipped at Kingston. By 1857 over 100 vessels, both steam and sail, hailed from Kingston. Only Quebec City had more ships claiming her as their home port.

During these mid-century years of expansion and growth, the fate of Kingston was very much identified with historical events of importance to Canada as a whole. The Rebellion of 1837 in Upper Canada resulted from abuses of power and privilege by a minority. Kingston was affected by these dissensions, but not nearly so much as other parts of the country. The grievances were mainly connected with the granting and tenure of land and the injurious influence of the Family Compact. The Hon. Thomas Markland of Kingston who wrote a report on the Midland District, referred to the abuses as: "The same cause which has surrounded Little York with a desert, created gloom and desolation about Kingston, otherwise beautifully situated—I mean the seizure and monopoly of land by people in office and favour". The monopoly meant that the outskirts of Kingston, to the east in particular, were desolate. with no dwellings for miles, the roads were in bad condition, and vegetables and other produce had to be imported by water from the United States. After the Rebellion, Britain recognized the need for a careful readjustment of colonial government policy. Lord Durham was sent to investigate and his famous Report changed Empire colonial policy.

ILLUSTRATIONS NOS. 4 to 8 incl. THE MAP of 1800 shows the original site of the English Fort, which replaced the earlier Fort Frontenac, the development southerly from the Fort, and also growth beginning to extend westerly up what is now Princess Street. THE AREA BUILT UP BY 1850 included all of the old Sydenham Ward. City Park was now enclosed, Barrie Street was being built and suburbs were appearing in Portsmouth around the Penitentiary, and in Williamsville at Princess Street. At Barriefield, across the Great Cataraqui River, Fort Henry had been established in its permanent form together with a group of buildings on Point Frederick. THE MAP OF 1867 shows the consolidation of previous development, and a continuously built-up residential area in the centre of the City corresponding in a general way with the study area. DEVELOPMENT UP TO 1915 consisted mainly of concentric growth outside the already built-up area, with a small settlement occurring around the Outer Station which had been established in the 1850's. A group of houses were beginning to form a link between Portsmouth and the City. The population of the City at this time was about 20,000. THE 1960 MAP indicates the present stage of development.

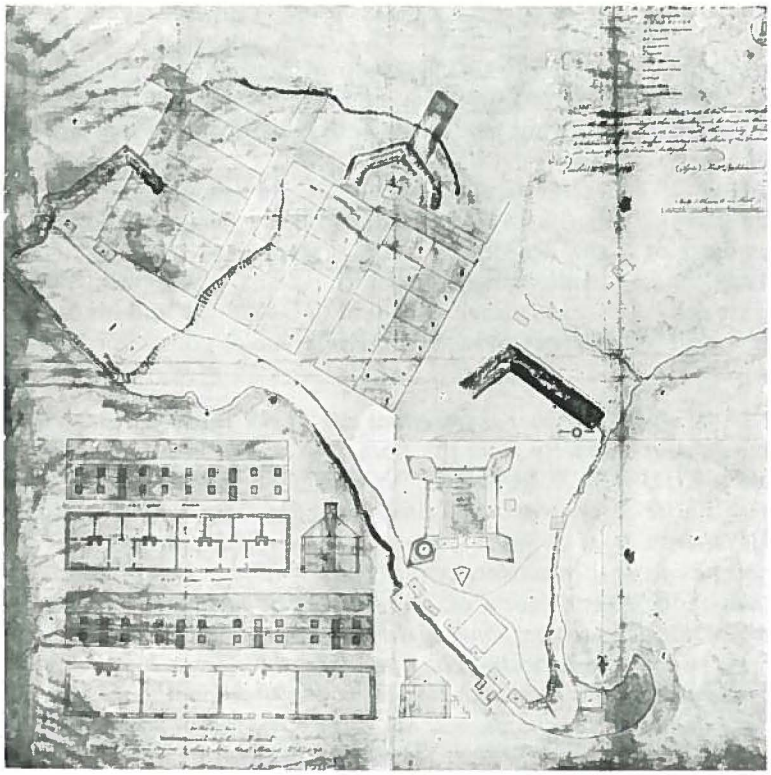


ILLUSTRATION NO. 9 (above)—KINGSTON, 1875. A birdseye view of the City as it existed 85 years ago. A striking feature is the commercial development of the harbour. The Grand Trunk Railway ran in front of the Market Battery, which became a park and then a railway station at the entrance to the City Hall. Queen's University was established on its present site and large sections of Brock and Princess Streets were used commercially.

ILLUSTRATION NO. 10 (left). The layout of Old Fort Frontenac and the town plot of Kingston prepared in Quebec, in 1784, by Frederick Haldimand. The town was based on the site of the Fort with three town blocks being laid out along what is now Ontario Street. The surveyor was instructed to lay out the remaining ground in the same manner according to the shape of the ground.

In 1841 the Provinces of Upper and Lower Canada were united and Lord Sydenham, as Governor-General, chose Kingston for the capital. Unfortunately ill-health dogged both Lord Sydenham and the three men who succeeded him. Finally under Lord Elgin, the son-in-law of Lord Durham, the union was made secure and there was a full exercise of responsible government. During this unsettled period of just over three years Kingston was the capital city, but in 1844 Lord Elgin removed the government to Montreal. The citizens of Kingston continued to hope for the return of capital status, but in 1858 Ottawa was, by Royal choice, made the capital. The decision in 1843 was a great blow to commercial prosperity in Kingston. Not only were its future character and destiny changed, but there was a sudden business depression, and land speculators who had been counting on Kingston's choice as capital were left with their hopes unrealized.

During this time of historical ups and downs the physical face of Kingston had begun to take on the character which is familiar to us today. St. George's Cathedral, built between 1825 and 1844, and the old St. Andrew's Church were erected in this period. In 1832 the Provincial Penitentiary, the present massive stone building, was begun, and Portsmouth and its ship-building yards grew up around it. In 1832 the old Fort Henry, built in 1813-14, was demolished and work started on the present structure.

The Loyalist settlers had come largely from New England and New York. Although loyal to the Crown, they earnestly desired self-government. After a half-century of agitation they secured an Act of Incorporation in 1838 with a constitution similar to that of Toronto, and the construction of a fine City Hall and Market was begun in 1843. The Roman Catholic Cathedral of St. Mary's was started in 1843. The handsome Bank of Montreal and Commercial Bank buildings (now occupied by the Frontenac Club Apartments and the Empire Life Insurance Company) belong to this period. The Martello towers, which remain today as wonderful landmarks for Kingston, were built in 1846. In 1848 the Market Battery was built between the City Hall and the lakefront but was demolished about 1875. For several years a park occupied this fine site, but in 1885 the railway was allowed to occupy it. The New Court House dates from 1855, and the Customs House and old Post Office were built in 1858. The Roman Catholic Regiopolis College was founded in 1838, but moved in 1869, when the buildings became part of the Hotel Dieu Hospital.

Queen's University, first known as "Queen's College" was incorporated by Royal Charter in 1841. The University grew and prospered and, in a few decades, produced many graduates who became important in the life of Kingston and of the whole country. In 1877 the University entered an era of great progress under George Grant, a Nova Scotian, who became the first native Canadian Principal. In 1884 Queen's refused to merge with the large central University of Toronto, preferring to retain an independent existence and its fine situation at Kingston.

As the years passed in the middle and latter part of the 19th century, those very things which had served as a foundation for Kingston's early prosperity began to slip away. It was no longer important as a military station, and shipbuilding dwindled. Due to the depletion of the white pine forests of Eastern Ontario, the timber trade declined. Grain elevators were built in the 1890's and Kingston retained much of the forwarding trade in wheat, but not as big a proportion of the vast new total, because of diversion to rail and to United States routes. Bulk cargoes, however, still went chiefly by water, and they do so today via the new Seaway; but it was chiefly the decline of the "package freight" business in the second half of the 19th Century which hit Kingston. Nevertheless, some thriving industries came to the town and physically Kingston made good progress in paving, street lighting, public utilities, and public parks.

From the earliest days education in Kingston had been considered important, and by the turn of the century there was a well established public school system, a fine Collegiate Institute, and a few private schools. In City Park, Kingston came to have the first public recreation ground of its kind in Canada. The land was bought from the Murney family as a possible site for the parliament buildings, and then later used as a parade ground for the Royal Artillery. It was handed over to the City by the Ordnance Board in 1852 for use as a park. Later, in the 1890's the City showed vision and foresight by acquiring two blocks of land, fencing and planting it with trees, and leaving it enclosed until the trees were grown. When Victoria Park was opened, it was perhaps considered a wasteful gesture, but time has proved how excellent was the planning for this project.

The years before the first World War saw an established way of life flourishing in Kingston. In 1911 street paving was begun with Barrie Street and later Princess Street. Theatres were always popular in Kingston, and silent films were being shown in several movie houses. Social life was active, with the Royal Military College and Queen's each providing a stimulating focus. The harbour was still a busy place, and numerous excursion boats

carried thousands of holiday makers up the Rideau Canal to Ottawa, through the Thousand Islands, across to Cape Vincent, or along the Bay of Quinte. At Queen's, Principal Grant had died in 1902, but it was not until 1912 that his dream of legislation to make the University non-denominational was realized. Faculties of Arts, Medicine, and Science were established during the reorganization and a period of steady improvement and growth began.

Kingston became immediately and personally involved in the first World War. The 21st Infantry Battalion was organized in October, 1914, and Headquarters were established at the Armouries. The Battalion, including hospital units from Queen's, McGill and Laval sailed for England in May, 1915. The 59th and 146th Battalions were also raised in Kingston. The 21st returned to Kingston in 1919, having lost 830 men and suffered 2,000 wounded.

Although the civic life of Kingston was sadly interrupted by the first War, the prosperous 1920's saw a new growth and many changes. The endowment of Queen's University was increased to over One Million Dollars, distinguished speakers appeared in town, travelling theatrical groups performed, and new motion picture theatres were opened.

The great economic depression of the 1930's brought hard times to all of Canada, although Kingston, with its many established institutions, was affected less than most cities and grew steadily. By 1938, Kingston was celebrating the centenary of its incorporation as a city. Fort Henry was restored and opened as a National Historical site. In 1939 King George and Queen Elizabeth visited Kingston and received a tremendous welcome. A few months after the Royal visit Kingston was again at war. The years which followed produced a different atmosphere from those of 1914-18, partly because of the long economic depression and partly because of the changes in Kingston itself. The second World War brought a new kind of industrial plant and life to the City. With their hundreds of trained workers, enormous factories, and large capital outlay, the Aluminum Company of Canada and the Canadian Industries Nylon Division have brought a distinctly 20th century outlook to Kingston. Professor J. A. Roy, in his book "The King's Town" observes that "the new companies are concerned with the civic organization of the city primarily as it affects the well-being of their employees and their factories". During the war years both these industries played a vitally important part in the war effort, and since 1945 have continued to expand and prosper.

As in 1812, Kingston again became busy with shipbuilding. The Canadian Shipbuilding and Engineering docks turned out four corvettes, warrior-type tugs, and were kept busy with overhaul and repair jobs. The British Empire Training Plan brought an important air station to Kingston and a Service Flying Training School for the R.A.F. and R.C.A.F. Many military formations were raised in Kingston during the war and served overseas with distinction. The Royal Military College was closed and the permanent force personnel placed on active service. Three other events of the war years were Queen's centenary celebrations, the choice of Kingston as publishing centre for the Catholic Register, and the establishment of a commercial radio station, C.K.W.S. The City itself observed its centenary in 1946. In 1948 a new National Defence College was opened at Fort Frontenac, and in the same year the Royal Military College was re-opened on a tri-service basis.

In the middle of the twentieth century Kingston is still a relatively small city. For its size, however, it has always played an exceptionally important part in the history of Canada as a whole. The opening of the St. Lawrence Seaway will undoubtedly have an effect on Kingston, but it will probably be instrumental in making it more the centre of a region of large modern industrial plants rather than an important lake port in itself. The gradual industrialization of the region around Kingston is diversifying employment and bringing prosperity and change. However, the inestimable benefits of such industrialization can be easily lost if care is not taken to maintain a balance between all the elements which go into the creation of a community which is truly a good place in which to work and live. Factories and stores are needed—so are parks and schools. New buildings of inspiring architecture have their place but may be found in any Canadian city. What is not so easily obtainable in the modern community is the sense of being in a "place"; of being somewhere that is different from all other places because this place has something that is its own and which cannot be duplicated elsewhere. Kingston has this unique quality which makes it such a splendid example of what a city ought to be. Tourists who each year come to Kingston in ever greater numbers have long recognized the City's beauty and individuality. This uniqueness comes in part from the City's magnificent scenic setting in one of the most beautiful parts of Canada and also from its numerous limestone buildings—many of noble proportions. Bruce Hutchinson, the author, has described Kingston as "a forever gray masterpiece". But B. K. Sandwell has seen it as "a bulwark of old-world, nineteenth-century quiet, gradually being surrounded and engulfed by twentieth-century industry." It is important that the intimate, ordered

and historical atmosphere of the city should be guarded jealously and even improved upon by citizens and officials alike. It was this fine character which made the City of Kingston, the Royal Military College and Fort Henry such a dramatic backdrop for the visit of Queen Elizabeth and Prince Philip in the Summer of 1959.

Kingston is one of the few older cities in which it is still possible for families of all kinds to live downtown. In fact there are not many modern suburbs to equal the quality and character of the Old Sydenham Ward, which lies between the lakefront parks and the centre of town. It is typical of all that is best in Kingston.

II. CONTEMPORARY KINGSTON

ILLUSTRATION NO. 11—THE ST. LAWRENCE RIVER AND LAKE ONTARIO. The City of Kingston enjoys a wonderful setting with vast stretches of water at it's doorstep and with the Thousand Islands tourist area in close proximity. Many beautiful open spaces face Lake Ontario, notably MacDonald Park, the Royal Military College, Fort Henry and Lake Ontario Park, but in places the lakefront has been badly used. The Great Cataraqui River forms a link with the Rideau Canal, which in Summer attracts large numbers of holiday makers in boats of all kinds.

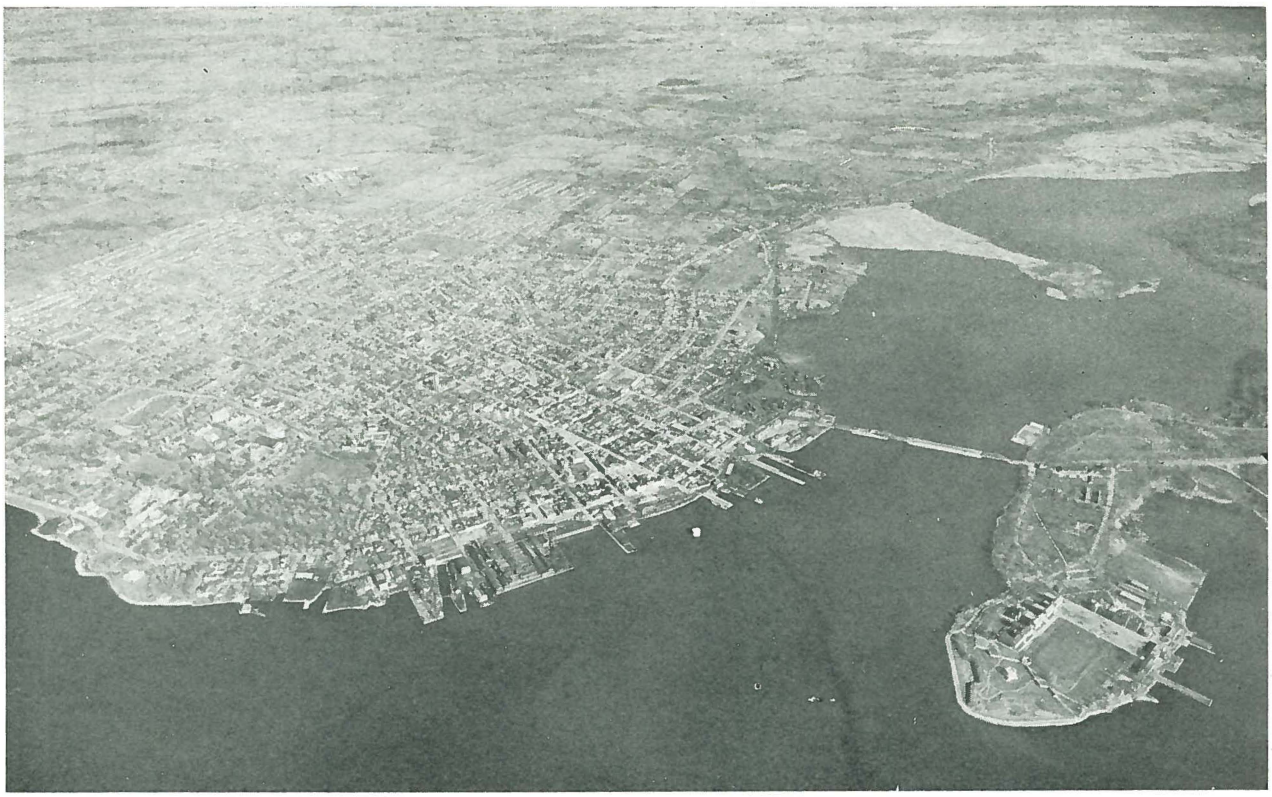


ILLUSTRATION NO. 12. AIR VIEW LOOKING WEST OVER THE CITY AND ITS ENVIRONS. This picture provides a beautiful illustration of Kingston's magnificent water setting. In the foreground is Lake Ontario which at this point meets the St. Lawrence River. To the right centre is the Great Cataraqui River which is really a lagoon of Lake Ontario. About two miles north, the River terminates at the locks of Kingston Mills and the beginning of the Rideau Canal system which ends in Ottawa. The City's eastern limits are on the east side of the river. At the tip of the peninsula at the lower right can be seen Fort Frederick and behind it the buildings and grounds of the Royal Military College. Point Frederick was once a naval dockyard. Linking the peninsula and the City is the LaSalle Causeway constructed in 1916; the first bridge was constructed in 1827. North of the causeway can be seen Bell's Island which has been joined to the mainland by a sanitary landfill project; in time it should become a valuable recreation area. In the foreground can be seen the waterfront industrial area including the Shipyards and Locomotive Works. A noticeable feature is the almost complete absence of watercraft. A century ago, the harbour in the foreground was filled with sailing vessels. Restoration of the waterfront area between the City Hall and the Shoal Tower and the development of much needed marina facilities should do much to make the City's front door once more a scene of activity. To the left is the spacious wooded area of City Park and beyond it the extensive buildings and grounds of Queen's University and Kingston General Hospital. In the upper left can be seen the large buildings of the Aluminum Company of Canada, one of the main employers in the City of Kingston. Nearby is the new Shopping Centre and running between them is Princess Street, a continuation of No. 2 Highway which bisects the City into north and south. Between City Park and Princess Street is the relatively compact mass of the Old City; it can easily be distinguished from the new outlying areas by its trees.

ILLUSTRATION NO. 13—AIR VIEW OF CITY CENTRE TOWARDS THE WEST. In the foreground appears the City Hall, complete with portico, and behind it is the Market Square. From 1848 to 1875 the space in front of the City Hall was occupied by the Market Battery which formed part of the defence system protecting Kingston and the entrance to the Rideau Canal. In 1875 the Battery was demolished and the area made into a park. In 1885 it was leased to the Kingston and Pembroke Railway for a station and freight yard. The Central Shopping Area, mainly based on Princess Street, begins to the right of the City Hall, and is bounded generally by Clarence Street, Brock Street and Queen Street going as far as Division Street. The two lower blocks to the right of the City Hall on either side of the bottom of Princess Street are in very poor condition and this whole lower area is deteriorating rapidly. Within recent months the City has been obliged to condemn some of the buildings and order their demolition in the interests of public safety. To the left of the Shopping Area a block-wide buffer of institutional buildings has discouraged the spread of commercial uses into the very fine residential area of Old Sydenham Ward. This buffer consists of such buildings as St. Mary's Cathedral and its associated schools, the Hotel Dieu Hospital Area, St. George's Cathedral, the Customs House and Old Post Office and other smaller institutions. The northern side of the Central Area to the right of Queen Street is less fortunate although the Army property between Sydenham and Bagot Streets together with the House of Providence form a similar buffer. It can be seen that there are few off-street parking spaces available, and most of the blocks in the Shopping Area appear solidly built up. Many industrial uses on the Waterfront between Johnson and Queen Streets have been abandoned and others are obsolescent. Much of the land they occupy could be used for much more valuable Waterfront development such as marinas, and hotels (or motels) and this would, in turn, encourage redevelopment of the lower Central Area.

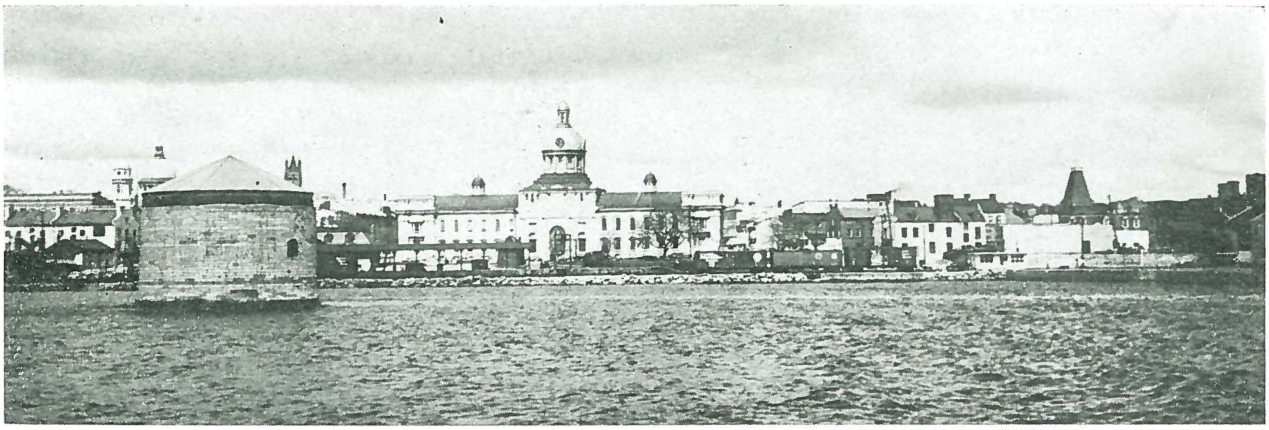


ILLUSTRATION NO. 14 (above)—In this view taken from the Wolfe Island ferry, many of the buildings that are representative of Kingston's Golden Age can be seen. The City Hall, Shoal Tower, St. George's Cathedral and the spire of Sydenham Street United Church present a colourful silhouette, with the tower of St. Mary's Cathedral dominating the Kingston skyline from a distance.

ILLUSTRATION NO. 15 — ST. GEORGE'S CATHEDRAL. The Cathedral forms the easterly end of the Institutional buildings which have acted as a buffer between the residential area of Sydenham Ward and the Shopping Area. The first part of St. George's Church was built in 1825; it was extended in 1846 with the addition of a clock tower and portico. In 1891 it was further enlarged, and its appearance cleverly changed from a simpler to a more decorative Classic, when the Great Dome was added.

ILLUSTRATION NO. 16 — FRONTENAC COUNTY COURT HOUSE. The Court House was built by the County Council in 1855-56. It stands on an elevated site facing the City Park and Lake Ontario, and has a fine entrance portico and dome. Its excellent proportions and imposing character never fail to impress visitors.

Kingston is a city of domes and towers. Seen from the water or from the commanding heights of Fort Henry they form an urban composition of the greatest beauty especially in the Summer months when viewed in the surrounding lawns and trees or against the blue waters of Lake Ontario.

ILLUSTRATION NO. 17 — THE MARKET SQUARE AND CITY HALL. The present location of the market place for the City of Kingston was established in very early days—long before the City Hall buildings were constructed. The latter, in their original form, included a large wing, extending towards King Street, which was destroyed by fire in 1865. The present police station is a somewhat modified version. Both the City Hall and the buildings on the south side of the Market Square form a fine architectural background to the Market, which is held three days weekly in the Summer and Fall.

ILLUSTRATION NO. 18—AERIAL VIEW OF UNIVERSITY AND HOSPITAL AREA. This view indicates the present growth of Queen's University and the Kingston General Hospital. Both institutions were established in the Golden Age of Kingston's history—the University being established first on Colborne St. in 1840, while the Hospital moved to its present site in the 1840's, to a building constructed originally to house the meeting of the first Provincial Government. Since then many buildings have been added in the hospital area, and it can be seen from this view that the site is far from spacious, in sharp contrast to the layout of the University property. Both areas are enhanced by the fine Park between Stuart Street and the Arts Buildings on the Campus. Kingston is fortunate in possessing also a fine Waterfront Park that surrounds the Murney Tower (in the bottom right-hand corner).

Many buildings of earlier decades still remain in Kingston, and a number of good examples are included to illustrate something of the unique character of the City. The gracious and fine old stone buildings need not be removed. Similar to the architecture of the Georgian period in England, especially in such details as doors and windows, many of the stone houses are pleasant in character through the use of well executed standard details which varied in cost and scale. There are many lessons to be learned from the fine proportions and the detailing of some of the better houses.

ILLUSTRATION NO. 19 — THE CARTWRIGHT HOUSE, KING STREET. This graceful residence merits preservation for both historic and architectural reasons. It has been the home of a number of prominent Kingston families and it invariably attracts the admiration of passers-by. It has always been kept in excellent condition, yet immediately to the rear only a change of level separates it from the industrial area containing the Shipyards and Locomotive Works.

ILLUSTRATION NO. 20—FRAME HOUSES —JOHNSON STREET. As wood was a local material and used plentifully in the construction of ships in Kingston it is not surprising to find many frame houses. This example, probably built late in the 19th Century, exhibits a high standard of workmanship in detailing and ornament and possibly some of the City's nautical character can be detected. Although in many cases good maintenance has held off the ravages of time, numerous frame houses are now becoming poor in condition mainly through age. From now on it can be expected that the stock of frame housing built towards the end of the 19th Century will deteriorate at an increasing rate.

ILLUSTRATION NO. 21—BRICK HOUSE, GORE STREET. The residence illustrated is a very charming example of a small town house built on half of an original town plot of 66 feet. Such houses have a longer life than the normal frame house, although it is quite probable that in many houses the brick is only a veneer. This house is in Sydenham Ward, where there is a fascinating wealth of fine architectural details especially in domestic doors and windows.

ILLUSTRATION NO. 22 — TENEMENT HOUSE, ONTARIO STREET. At the end of the 19th Century this building was known as the Anglo-American Hotel. It is now used for 8 apartments, which accommodate approximately 34 people sharing two bathrooms and four toilets. Some of the original hotel rooms have been converted merely by dividing them into spaces separated by low partitions. Words are inadequate to describe the living conditions in this building and other dwellings in the immediate vicinity. They would be regarded as substandard by any housing code.

ILLUSTRATION NO. 23—HOUSING, MAIN STREET. Frame row-housing which is poor inside and out. Almost every part is in need of some repair, and there are deficiencies in sanitary accommodation. It would almost certainly be uneconomic to bring houses of this condition and age up to the barest minimum requirements of a housing code.

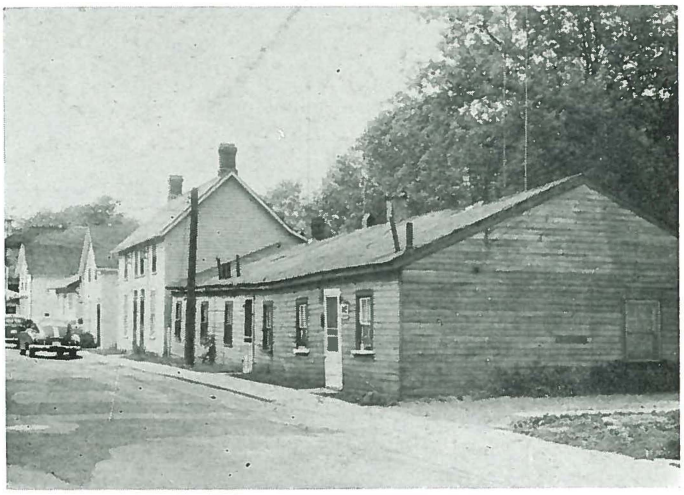


ILLUSTRATION NO. 24—BRICK HOUSE, ELLICE STREET. Although brick is a good building material, over a long period and with poor foundation conditions, structural deterioration can result and this will affect internal living conditions. Such conditions may occur in any residential area; but in those where the general environment is poor, improvements are seldom made.

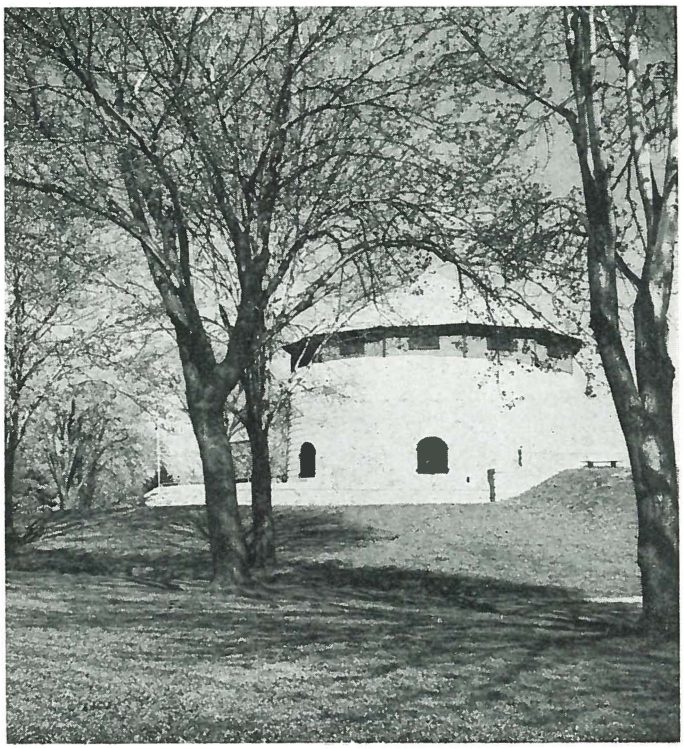
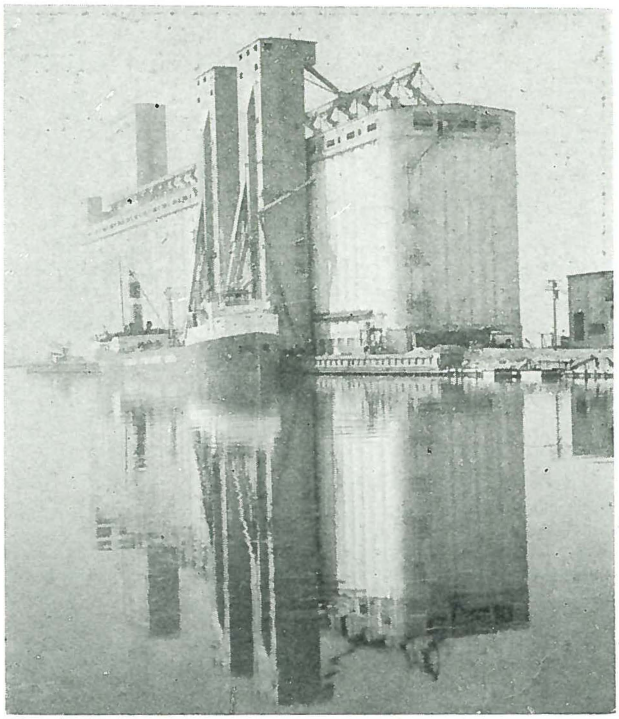


ILLUSTRATION NO. 25—RECREATiON-AL AREAS IN THE CITY. Frontenac Park (above), once part of the Clergy Reserve at the north of the original town layout, in 1820 became the first burial ground for Kingston. Later it became a Park in the middle of a heavily populated residential area close to the Central Business District. It provides a valuable recreation area for many children.

ILLUSTRATION NO. 26—WATERFRONT RECREATION AREA, MURNEY TOWER IN MacDONALD PARK. A chain of four martello towers was built across the harbour of Kingston in 1846 to strengthen the defensive system guarding the entrance to the Rideau Canal. Murney Tower is in MacDonald Park —a most attractive open space, popular with many Kingston residents as well as visitors. The tower is now used as a museum.

ILLUSTRATION NO. 27—CATARAQUI BAY GRAIN ELEVATOR. Early in Kingston's history much of its shipbuilding activity was focused on Navy Bay, but after the war of 1812 the commercial activity which continued was located along the lakeshore in the present industrial section on Ontario Street. A later development was the construction of a Grain Elevator in Little Cataraqui Bay. Since the opening of the St. Lawrence Seaway greater emphasis has been placed on the draught of water available for shipping and two facts emerge: (1) the entrances to the existing industrial section near the Cataraqui River, centred around the original town site of Kingston, are difficult to negotiate because of shoals; (2) the Little Cataraqui Bay has a channel dredged to a depth of 18 to 23 feet which is by far the deepest in the Kingston Area. It is therefore to be expected that the land around the present Grain Elevator will develop much more intensively to provide the type of Waterfront Activities Kingston might be able to support in future.



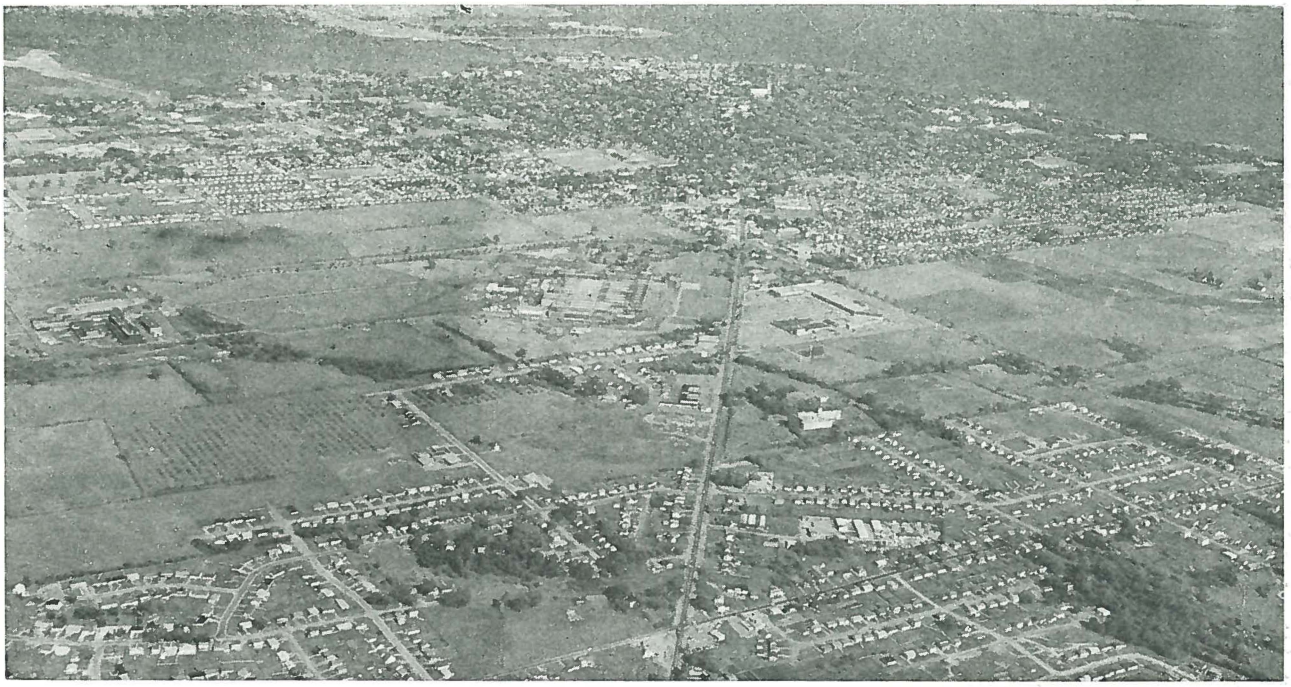


ILLUSTRATION NO. 28—AERIAL VIEW OF NEW HOUSING AREA. This view is taken from the City boundary which follows the low-lying land along Little Cataraqui Creek on the west of the City. In the foreground are the new subdivisions of Strathcona Park, Glenarden, Hillendale and a section of Valleyview. Between these housing areas and the Old City, distinguished by the presence of mature trees, can be seen the Aluminum Plant and the Shopping Centre— which dominate the vicinity of the Traffic Circle where Highways 33 and 2 meet. The new subdivisions provide a planned residential environment.

III. KINGSTON AND REGION

Today we hear the term "Kingston Region" used, but it may mean different things to different persons. One could say that a "region" is an area of land which may be identified as an entity with a centre of its own, and having special physical, economic and social characteristics. For instance, a pamphlet published by the Kingston Whig-Standard says that the Kingston Market Area extends approximately 40 miles east and west, and 50 miles north of the City itself. In this area there is a population of 101,000 including that of the City itself.

In a region of this kind administrative boundaries tend to become obsolete, and spheres of influence may more easily be defined by physical rather than administrative boundaries. In order that planning problems may be in a reasonable context, it is necessary to study and plan for changes in land use on a city-regional basis. Two areas embracing the city have been studied. To examine the economic and physical growth of the region on a broad background we have considered an area from Adolphustown to Gananoque. But in order to make physical proposals the Planning Study was confined to the City and surrounding Townships of Kingston and Pittsburgh.

With the decision to re-establish Fort Frontenac and the movement of the United Empire Loyalists from the United States, the Townships of Kingston, Ernestown, Fredericksburgh, Adolphustown and Marysburgh were laid out along Lake Ontario in 1784. A townsite plan was also laid out for the town of Cataraqui or Kingston. Adolphustown served certain administrative functions but became largely an agricultural township. Bath, in Ernestown Township, formed an early commercial centre for shipbuilding and then for the grain trade.

At the head of the St. Lawrence and at the foot of Lake Ontario, Kingston was early prominent as a trans-shipment port. It was in a key position for fur trading, shipbuilding, and timber trading. As a centre of national and provincial importance, its growth was related to that of Upper Canada. As Canada grew Kingston's area of influence gradually decreased and it came to share less in Canadian expansion. The building of the Grand Trunk Railway in 1853 was the first blow to the city's importance as a trans-shipment centre. With the transfer of grain production to Western Ontario, population began to drift away from the farms of Frontenac County and this decline in population was accentuated by the disappearance of the lumber trade at the turn of the century. After the great activity of the early period in Kingston there followed a long period of adjustment and slow growth. During this latter time Kingston was sustained more and more by its institutions, and less by its commerce and industry.

The city is no longer a physical entity within administrative boundaries. It is now part of a city-region. In the past methods of communication were slow, and with a smaller population and a different social and economic life, urban growth was on the edge of the urbanized area. The advent of the automobile has coincided with a general rise in living standards and city growth has become explosive with urban fragments scattered in the surrounding countryside. The Aluminum and Nylon Plants, built in Kingston at the beginning of the last War, marked a change in the pace of growth and signalled the beginning of a marked increase in population. Located at that time beyond the City Limits, the new industries stimulated growth in the area immediately surrounding the City. In 1953, the large C.I.L. Terylene Plant was built in the Township of Ernestown, ten miles beyond the Kingston City boundary. It has encouraged a new series of residential developments in rural areas, which also serve an increasing number of commuters to Kingston.

The three large industrial plants of the Aluminum Company, DuPont, and the C.I.L. are forerunners of the kind of industrial development which may occur in the Kingston city-region. Communications for industrial plants of this type will be by ship, rail, road and perhaps air, and will be important in any plan for the whole region. There will be heavier demands in the regions outside the city for land for housing, schools, local roads, and recreation areas. A regional plan should show where the new elements of growth would best be placed as well as consider the continuing needs of agriculture.

Geologically, the region is generally composed of a limestone plain but a section of clay flats, the most suitable land for residential development, exists between Collins Bay and the Little Cataraqui Creek, stretching as far north as Cataraqui Village and parts of Highway 401.

Physically, the area is distinguished by its relation to Lake Ontario. The lake supplies water and receives sewage effluent. It is also a valuable recreation area, and a means of transport. The major element next in importance to the lake is the Great Cataraqui River which connects with the Rideau

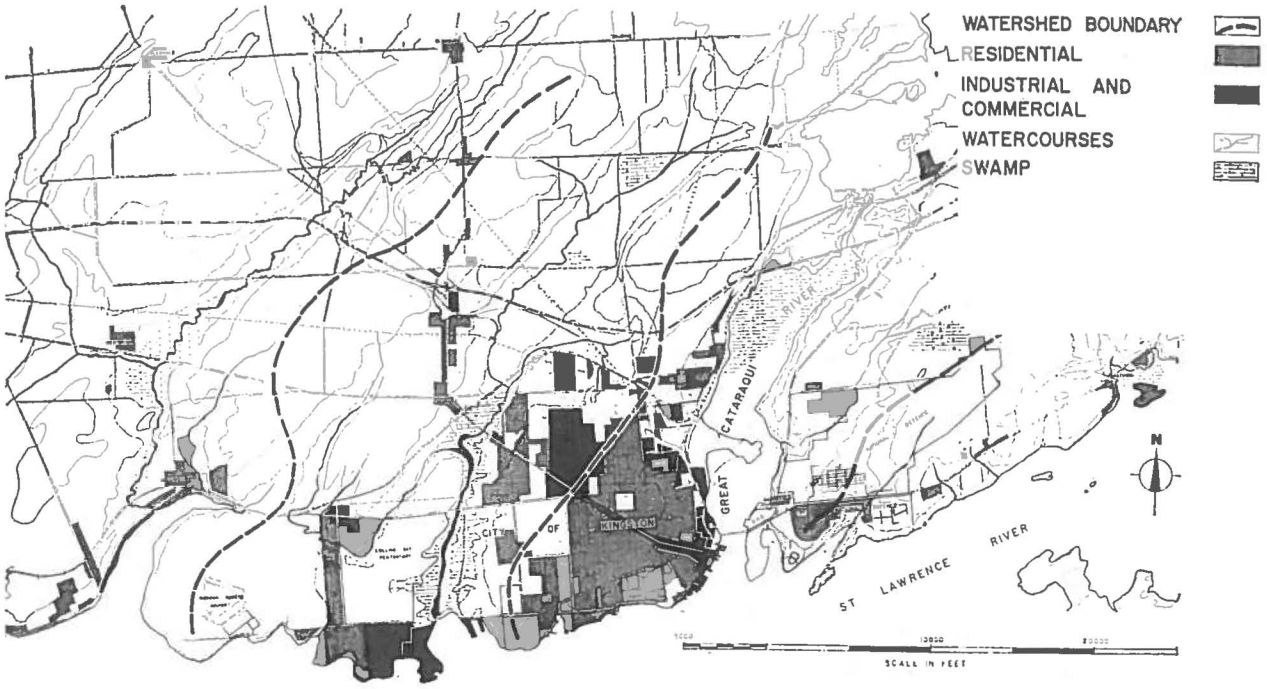


ILLUSTRATION NO. 33—MAP 1. REGION, EXISTING LAND USE.

Canal. To the west, the low-lying lands of Little Cataraqui Creek form a noticeable obstacle to development and should remain as a valuable open space.

The land of the city is ridged, with high land passing through it and becoming considerably higher above Highway 401.

In this age of the automobile and great personal mobility, the well-being of a central City is inseparable from the efficient functioning of its surrounding region. In 1952 the City annexed 5,585 acres of land containing 9,000 persons. Included were several partially developed suburbs—Rideau Heights, Kingscourt, Grenville Park, Hillendale, Valleyview, and Portsmouth Village. The extension of city services to these areas has encouraged considerable subdivision and home building. There is still enough serviceable land within the City Limits to provide for another 10 years of growth both residential and industrial. The availability of serviceable land however, has not halted the growth of new unplanned development on cheap land beyond the City limits, and if this process continues some of the problems incurred in 1950 will emerge again in greater magnitude in 1970. This is not to say that there should not be development in outlying areas, but it does suggest that planning should be effective on a regional as well as a local scale.

The dimensions of the area which constitutes the community of Greater Kingston may more readily be appreciated by examination of the regional maps in the Report and by a consideration of the anticipated population growth. By 1980, the population which now stands at more than 60,000, in all probability will have reached 120,000 - 130,000 and will require twice as many schools and other facilities. Most of the new growth will undoubtedly be towards the west. While there will be some development in Pittsburgh Township to the east, various inhibiting factors such as the Great Cataraqui River, the extensive grounds of the military camp and the rocky and uneven character of the terrain will probably continue to discourage large scale development. To the west, however, especially south of Highway 401, conditions are highly favourable. Soil cover is good, the terrain is reasonably level, and highway communications to the City are excellent.

Conditions which favour residential development also attract industry. (It will be noted that the area's three largest manufacturing plants are all located to the west of Kingston.) There are large tracts of suitable land readily available at reasonable prices close to the bountiful water supply of Lake Ontario and to major highway, rail and water communications. In addition, the Kingston area is close to and equidistant from Montreal and Toronto, the largest market areas in Canada. The presence of so many favourable factors should ensure a continuation of the present trend towards

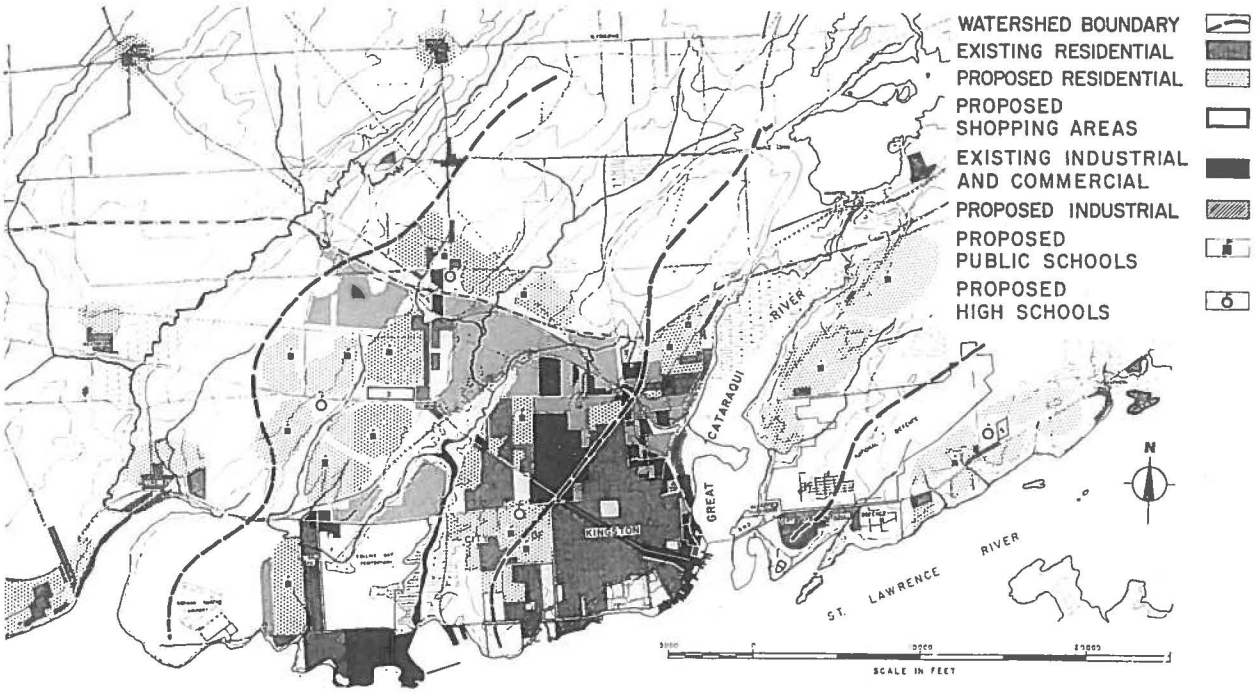


ILLUSTRATION NO. 34—MAP 2. REGION, PROJECTED LAND USE, 1980.

the establishment of large new industries in the city-region.

Planning should seek to promote the most economic, practical and seemly development in the city-region. Every encouragement should be given for new residential development to be continuous and compact, so that servicing can be provided at a minimum financial cost to developers and tax payers. If complete services are provided at the outset, or near the beginning, a financial saving is effected. In the city-regional planning proposals, the watershed boundaries have provided defining lines for residential development. If they are respected, services should be economically provided and development kept closely-knit. Although some development will occur outside the areas indicated for greatest residential growth, it is to be hoped that it will take place around existing settlements.

The land use proposals for the City of 1980 as compared with the city-region show little change. There will be changes, but they will largely involve rounding out and new buildings replacing old ones. In the coming years the use of Highway 401 will become increasingly important. Generally speaking provision for new industrial growth in the City has been made near to this Highway. The area near the present Grain Elevator in Little Cataraqui Bay has been proposed for harbour and industrial expansion if the need should occur.

Bearing in mind the spiralling costs to a municipality when new residential development occurs in a haphazard manner, growth in the suburban areas should follow certain principles which can be stated as follows:

(a) Use of watershed boundaries to define limits of serviced development.
(b) Concentration of future residential growth around existing centres.
(c) Urban residential development to have full urban services.
(d) Adoption of the "neighbourhood" concept, so that houses, schools, open spaces and services are properly related.

New highways favour development west of the City. Highway 401, although designed for inter-city provincial traffic will be used for considerable regional traffic and will attract development at points accessible to the interchanges. Provincial Highway No. 2 will become less significant as an inter-city route but will assume more importance as a local highway within the Kingston city-region. Highway 15 will continue to be a main inter-city route and both 15 and 38 can expect higher volumes of local traffic, especially on week-ends, as more people acquire cottages or take advantage of newly developed park facilities in the Rideau Lakes district.

Highway 33, the Bath Road, has a very special role to play. It must serve the growing suburban areas of Collin's Bay and Amherstview and, unless an alternative route is provided, it must carry

increasing volumes of traffic between the City and the large new industrial areas to the west. The Bath Road is one of the finest scenic highways in Canada and it deserves very close consideration and special treatment by the Province. It should become an integral part of the St. Lawrence parks system now being developed along the Seaway. An important step in this direction has already been taken with the acquisition of historic Fairfield House, but this should be regarded as only a beginning. It will also be necessary to secure as much land as possible between the road and the shoreline without delay. To serve the needs of the increasing volume of truck and local automobile traffic, as new growth takes place towards Bath, a new east-west road north of Highway No. 33 and south of Highway No. 2, should be established. Improvement of north-south connections should also be effected by linking up Highway 38 with Day's Road. With the adoption of these two suggestions the regional road pattern in this area would provide a more suitable framework for development.

Such improvements however, are obviously not within the financial capacity of the rural-suburban townships wherein they would occur. Nor is it likely that they could be afforded by a regional pooling of local resources. Nevertheless it is important for the region's future that steps be taken now at least to reserve the needed rights of way and it would appear to be a provincial responsibility to see that this is done.

Mention has been made of the region's good system of communications by road, rail and water. Air service is the missing link. The region already possesses an excellent facility in Norman Rogers Airport and there is the promise of an airline operation in 1960. It would be wise to protect the airport and its environs in anticipation of its serving a very real need within the entire region. By 1980 the airport may well be regarded by the region as an indispensable part of the province's inter-city transportation system.

As Kingston grows, the preservation of existing open space both in the City proper and in the region should be given careful consideration. An increasing population will need more "breathing space," and it will be wise to provide for recreational areas and green spaces of diverse character.

Much progress has been made in the provision of Provincial Parks. Within recent years fine new parks have been established at Black Lake, Silver Lake, Big Sandy Bay and Adolphustown. In addition there are numerous small parks along the highways. All of these however are too small or too far from Kingston. There is need for a larger park reasonably close to the more heavily populated centre. The Rideau Lakes District would appear to offer an ideal setting for such a regional park. The Provincial Government should consider the establishment of a park of this type which would not only be of use to the people of the Kingston region but to the whole of the province between Toronto, Ottawa and Cornwall.

A regional problem is posed by the need for new water intakes and sewage disposal facilities. In fact, this is the kind of provincial problem which led to the creation of the Ontario Water Resources Commission. Rapidly growing municipalities cannot go on indefinitely dumping their raw sewage into each other's water supply. It would also seem to be the height of economic folly not to consider water supply and sewage disposal on a regional basis. At present, only the City with its greater financial resources can afford proper water and sewage facilities, and it has not yet provided full treatment for its sewage. The Provincial Government has recently halted the further subdivision of land in Kingston Township where it has been proposed to use septic tanks and has suggested the provision of proper sanitary sewage disposal works. In the long run such provision cannot be made on a purely local basis. The time is ripe for a high level conference of provincial, county and municipal officials to consider an overall solution to this regional problem.

Sewerage Policy:

In the City of Kingston:

There is still the northern section to be serviced; nearly all other lots in the City have sewers and water supply.

In Kingston Township:

Sewer installation is imminent; the La Salle Park area may be the first to be served, but rural "suburban" development should be stopped or a policy established to provide services following development.

In Pittsburgh Township:

Development should be restricted initially to an area capable of being serviced by the City Sewage Treatment Plant. The army property unfortunately prevents any economical continuation northwards of the new sewer line. Septic tanks may, therefore, be required in the northern section of the Township, near the 401 bridgehead. The policy would vary from that proposed for Kingston Township, but the area to be developed with septic tanks would be minor.

Another solution might be the acceptance of a higher density scheme in this area to enable a

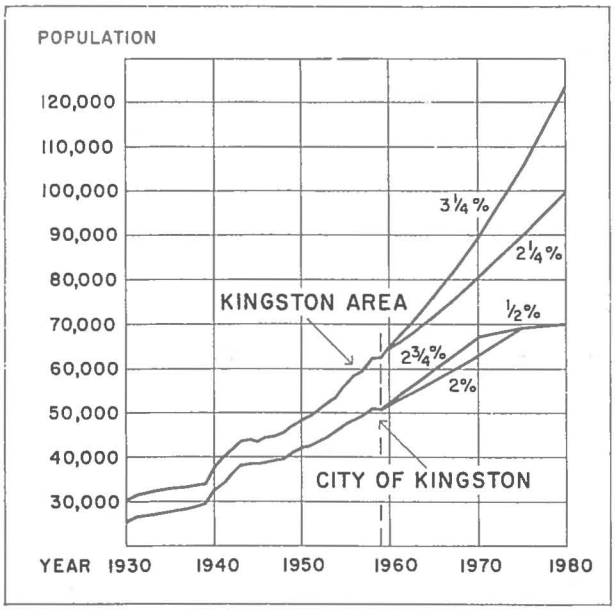


ILLUSTRATION NO. 35—PROJECTED POPULATION FORECAST, CITY OF KINGSTON AND KINGSTON AREA. The Kingston Area here includes the Township of Pittsburgh, Township of Kingston and the City of Kingston but it excludes the military population in Pittsburgh Township. The City of Kingston population and its growth refers to the area within the present City. (The above graph also relates to the economic study which was prepared for the Report by the Institute of Local Government, Queen's University.)

separate sewerage system to be established economically. Development might then be restricted to two areas—one for full urban services, and the other with only water service and septic tanks on large lots. The latter should be so organized as to allow re-subdivision into smaller lots when full services are available, thus providing more residents to carry the financial load.

Before long it would be sensible to have a tax equalization scheme so that full services could be provided throughout the region. If Kingston Township is to connect up to the City Sewerage System, new pipes will have to be laid to serve approximately 50,000 additional persons in the next twenty years. All the sewage would be pumped across the river to the City Disposal Plant. The later stage of an extension scheme could also serve urban development in Pittsburgh Township.

If however, Kingston Township were to develop its own system, Pittsburgh Township would then have to make plans for two areas—one adjacent to the city disposal plant, and the other alongside Highway 15, where septic tanks would be the probable outcome, subject to Health Department approval.

To summarize, it is clear that the Kingston area is facing certain problems with respect to water supply, sewage disposal, highways and parks, and other matters, and that adequate solutions cannot be reached on a purely local basis. In some respects these matters should be discussed at the Provincial level, with a view to Provincial participation, but in any case a regional or cooperative approach is needed. This is especially true in the matter of industrial assessment. There already exists a Kingston Area Planning Board which has not been fully effective as it has no permanent staff and only a nominal budget. Planning for the City and the Townships of Kingston and Pittsburgh is actually carried out by the staff of the City Planning Office. It is suggested that a more satisfactory working arrangement would come through the establishment of one Planning Board and staff for the region, in place of the present four planning boards whose activities must inevitably produce a certain amount of duplication and a piecemeal approach to planning. With one Planning Board, procedure might then be as follows:

(1) Preparation and adoption of a regional plan, as a flexible framework for development.
(2) Communities delimited in regional plan.
(3) Communities developed in accordance with population and industrial growth.
(4) Development plans indicating zoning and densities standards to be prepared.
(5) Detailed layout and zoning plans for neighbourhoods prepared as required.
(6) Restraints on premature development, so that the planned areas may be completed in orderly fashion.

IV. ECONOMIC BACKGROUND

PREPARED BY THE INSTITUTE OF LOCAL GOVERNMENT
QUEEN'S UNIVERSITY

Kingston's Early Importance

From the date of its founding, Kingston has been important, not because of the products of the city and the surrounding area, but because of its special relationships to a much wider area. Unlike most cities of its size, Kingston is not primarily a manufacturing centre but is a place which supplies services of regional, provincial and national importance.

Originally Kingston was a military, administrative and trading centre, and until about 1840 its growth and prosperity depended on these functions. Its geographic position meant that all traffic on the St. Lawrence River had to pass Kingston. Being a convenient place to change from river to lake boats and vice versa, and as it was a strategic military location, Kingston was the most important place west of Montreal. With the coming of the Loyalists it also became the centre of the earliest and largest settled area in what was soon to be Upper Canada.

Kingston rapidly developed an importance as a commercial and wholesaling centre for both the surrounding district and the province as a whole. Across its docks passed most of the merchandise imported into Upper Canada and its early leading citizens were merchants and forwarders. It was also the centre for the export trade in timber, potash and, at a later date, grain, and was an important manufacturing centre with many small industries catering to the local market. To these activities were added those of a military and naval centre. As a result of these circumstances Kingston benefited particularly from the War of 1812. As late as 1830, Kingston was the unquestioned economic and cultural capital of Upper Canada and, with a population of 3,800, considerably larger than its only rival, the more recent settlement of York, later to become Toronto.

Already changes in the economy were working against the dominance of Kingston. Its rate of growth became less rapid and although the population tripled between 1830 and 1851, the population of Toronto increased ten fold in the same period. The brief period 1841-44 as capital of Canada, after the Act of Union, enhanced Kingston's position but on the transfer of the capital it lost about 1,700 inhabitants.

The decline in importance relative to other centres was due to a combination of factors. The centre of settlement moved westward and Kingston was handicapped then, as now, by having a restricted local market due to its relatively poor and sparsely populated hinterland. The opening of the Erie Canal in 1825 diverted much of the American grain trade away from the St. Lawrence ports and Toronto gradually replaced Kingston as the chief commercial centre of Upper Canada. Furthermore, in the period 1850-1880 the provincial road system and the railway network of Ontario became centred on Toronto,

TABLE I

	POPULATION FOR CENSUS YEARS	
Year	*Ontario*	*Population of Kingston City*
1820		2,300
1830		3,800
1851		11,585
1861		13,743
1871	1,624,000	12,407
1881	1,927,000	14,091
1891	2,114,000	19,263
1901	2,183,000	17,961
1911	2,527,000	18,874
1921	2,934,000	21,753
1931	3,432,000	23,439
1941	3,598,000	30,126
1951	4,598,000	33,459
1956	5,405,000	48,581

Source: Census.

Note: 1. 1861-1871: The decrease of 1,336 between 1861 and 1871 is apparently due entirely to the withdrawal of the British garrison.

2. 1941-1956: These should be adjusted for a true picture as there is no allowance made in the 1941 and 1951 census figures for the population in the area annexed to the City in 1952, nor for the substantial suburban development outside the City limits in the 1956 population figure.

and this, together with the decreasing relative importance of lake shipping, further undermined Kingston's position. In addition, towards the latter part of the nineteenth century there were great changes in the industrial structure of Canada generally and of Ontario in particular. The large number of small plants, serving mainly the local market, gave way to a smaller number of much larger plants serving a wide area. In Kingston the results of this were astonishing; the number of manufacturing establishments decreased from 401 in 1891 to 42 twenty years later. The workings of these factors are dramatically shown by the changes in population.

The population of Kingston from 1851 onwards to 1921 was relatively static, except for jumps between 1881 and 1891, and between 1911 and 1921, the latter being due to the First World War. In some years the population actually declined. This is a striking contrast to the population changes in Canada generally and in Ontario in particular. This period of what amounts almost to stagnation was due to the absence of any substantial basis for growth in Kingston.

On the one hand the general growth of Ontario and Canada and the urbanization of economic activity would be expected to produce growth in Kingston as elsewhere. On the other hand, there were influences working to retard Kingston's growth, including, in addition to those already mentioned, the movement of population out of the surrounding rural areas and the tendency of the increasingly important manufacturing activity to concentrate in other centres which were better located with relation to the main markets. The forces making for growth and those making for a reduction in size almost balanced and as a result Kingston, having had its growth early, along with the rest of Eastern Ontario. did not share in the general prosperity to the extent it had earlier.

This period of very slow growth following after many years of prosperity left its mark on the character of the city. The limited opportunities available meant that many Kingstonians went elsewhere to find employment. The city matured earlier than other centres where prosperity arrived later and Kingston came to have a reputation of being very pleasant but a bit of a backwater. Like most reputations there was an element of truth in this.

Renewed Prosperity

Between 1920 and 1935 changes began to appear with a renewed prosperity and a steady population increase. Today it is readily apparent that a different set of forces have been and are at work. As a result of a new conjunction of influences Kingston is enjoying a rate of growth and general prosperity somewhat above the average for Canadian cities.

In the first place, the forces which had held Kingston back were largely spent. The importance of Kingston as a port had reached a low level and its commercial and shipping activities ceased to be among the major industries. The movement of population out of the surrounding rural areas could not continue at the same rate indefinitely, and most of the small industries which supplied the local market had closed down or moved elsewhere. These elements all had a braking effect on the local economy but as they worked themselves out, other influences making for expansion were becoming more significant.

There are a number of main identifiable influences, particularly changes in the manufacturing pattern, which are closely related to the improvements in the road network. Lying between the two major markets of Toronto and Montreal, the improvement in the road system has been particularly important in Eastern Ontario, having the effect of making access to the two largest markets easier. Consequently Kingston has become a more attractive location for industry, particularly for the branch plants which are the form which industrial growth is increasingly taking. In addition, changes in technology are making water more important in industrial processes, and in this respect the Kingston area enjoys a very favourable position which has already attracted two large chemical plants. The revival of economic activity in Eastern Ontario, the trend towards urbanism which has brought a general growth in urban centres, and the growing importance of Kingston as a centre supplying services to a wide area have all been important.

Present Economic Activity

Having *surveyed* the main historical elements which shape the character of the city, one can begin to *examine* its present character. Particular reference will be made to the factors mentioned in the foregoing paragraph. Based on these, some estimates can be made as to the nature and magnitude of growth that may be anticipated in future.

The rural areas around Kingston have become more prosperous as roads and access to both the local and more distant markets have improved; at the same time urban markets for agricultural products have increased in size and the tourist trade has become a significant source of income with particular importance in the poorest agricultural areas. The greater opportunities in Kingston have also helped the rural area in that many rural dwellers have seasonal or permanent employment in Kingston. A more prosperous rural area means larger markets for Kingston

businesses and hence a larger and more prosperous city population. In addition, Kingston has shared in the general increase in manufacturing to a very large extent. The number of manufacturing establishments in Kingston rose from 57 in 1930 to 80 in 1957 and the labour force they employed increased from 1632 to 6310 or 287% in the same period. This is a considerably larger increase than most urban centres in the Toronto-Kingston area experienced in this period. (1)

By themselves these figures would justify a very large growth in population. That this is not the whole story can be seen from examining the employment statistics.

TABLE II

PERCENTAGE OF LABOUR FORCE EMPLOYED IN MANUFACTURING

	1941	1951
average of ten largest metropolitan areas (1)	34.5	31.8
average of all Canadian cities 30-100,000 population	35.2	31.8
Toronto (metropolitan area)	38.0	35.3
Oshawa	67.4	63.8
Peterborough	54.0	54.8
London	34.2	32.2
Brantford	58.0	56.1
Belleville	28.0	29.7
Kitchener	59.7	54.7
Kingston	32.8	26.7

(1) Quebec, Montreal, Ottawa, Toronto, Hamilton, Winnipeg, Windsor, Calgary, Edmonton and Vancouver. Source: Census.

From these figures it is apparent that Kingston is not primarily dependent on industry in the sense that Kitchener, Oshawa or, for example, Peterborough are. Employment in manufacturing is important and has increased but as the proportion has not increased, this cannot explain all of the increase in population. To account for this one must turn to the other economic activities of Kingston as shown in the figures of employment in different types of industry.

Some of the variations in Table III, particularly in "manufacturing" and "service," can be explained largely by the change from depression to war to peace. The growth in the proportion employed in manufacturing from 14.5% to 26.7% has been largely at the expense of transportation (-6.1%), construction (-2.4%), and other (-2.3%) which includes agriculture, quarrying, public utilities and unemployed.

(1) See J. Spelt, *The Urban Development of South-Central Ontario* p. 186 for comparable figures.

From these employment figures a good picture of the basic economic activity of Kingston can be derived. The dominant category is the so-called service industry.

TABLE III

KINGSTON: LABOUR FORCE BY INDUSTRY (%)

	1931	1941	1951
Manufacturing	14.5	32.8	26.7
Construction	8.8	10.0	6.4
Transportation	11.0	6.9	4.9
Trade	17.3	15.6	16.2
Finance and insurance	3.0	3.1	3.3
Service	40.9	29.0	40.3
Other	4.5	2.6	2.2
TOTAL	100.0	100.0	100.0

Note: 1931 and 1941 are not strictly comparable to 1951 due to a change in the basis of the census. The difference is not significant for our purpose here. Source: Census.

The service occupations or industries are of a personal nature and can be divided into two main types, according to the area served. Some are of a largely local nature—dry-cleaning, window-washing, teachers, lawyers, nurses, gardeners, police, etc. All cities and towns have a considerable proportion of the labour force engaged in these kinds of activity catering to the needs of the city and the area immediately around it. The other type of service industry is that serving the needs of a larger area—the hospitals, penitentiaries, religious and educational institutions and the military establishments. Kingston has an unusually large amount of this type of activity related principally to national and provincial needs. While forty per cent of the labour force in Kingston is engaged in service industries, the percentages in some predominantly manufacturing towns are: Oshawa 7.2, Peterborough 11.2, Sarnia 8.9 and Kitchener 14.8. Even London, which is comparable to Kingston as the centre for a large area and which has many institutions, has only 26.1 per cent of the labour force so occupied. The service industries employ the largest proportion of Kingston's labour force and the proportion has remained remarkably constant. This concentration in Kingston of a variety of institutions and military establishments, if taken together, at least equal manufacturing as a major industry. Like most of Kingston's manufacturing plants, they are concerned mainly with supplying provincial and national needs.

Aside from the military element which has always been important in Kingston, the complex of

institutions dates back to the 1830's and 1840's when the Kingston Penitentiary, Ontario Hospital, Kingston General Hospital, Hotel Dieu Hospital and Queen's University were all established. All of these institutions have grown and are now very large employers. The relation between the hospitals, the university and some of the military establishments has produced a combination with a considerable growth potential. There is a group of related medical institutions based on the teaching facilities, and also a group of research facilities for which Kingston has considerable attractions. The combination of long established military and educational facilities has also probably been decisive in the Army locating many of its more recently added establishments in Kingston. In this group of institutions the university, while not the largest employer, is certainly the indispensable element. The penitentiary has also expanded until there are four penal institutions and the Penitentiary Staff College all in and around Kingston.

There is a diversity of industries in Kingston which, with few exceptions, are all characterized by being stable employers. Most of them have a record of steady expansion which seems likely to continue. The depression did not affect Kingston as severely as many cities for, although the manufacturing plants were very hard hit, the institutions and the military establishments acted as cushions. Certainly another major depression would not have the effect in Kingston that it would have elsewhere. In addition, seasonal variations in employment are relatively low.

The reasons for this can be seen from a list of the principal employers. The largest single employer is the Department of National Defence with 2,000 civilian employees in the various establishments. In addition, there are several thousand troops stationed in the Kingston area and the Royal Military College employs several hundred civilians. The five civilian hospitals as a group employ some 2,000 aside from professional staff, and the university employs about 800. There are about 750 employed at the penitentiaries including the new Joyceville Institution some fifteen miles north-east of Kingston. These "service" industries not only represent direct employment but also bring many people to Kingston on a temporary basis whether as hospital patients, students, members of the armed forces or otherwise. The effects of this are particularly noticeable in winter when temporary residents form a counterpart to the substantial summer tourist business.

Of the major manufacturers, the Aluminum Company of Canada Limited, engaged in aluminum fabrication, employs 2,100 in addition to those in a sizeable research establishment. The nylon plant of the DuPont Company employs 1,400 and also has over one hundred employed in the research laboratories. These, and the Canadian Industries Limited plant ten miles west of Kingston, which employs 650, have all located since 1938 and are of the type likely to expand. There is also a variety of smaller industries. Only two sizeable industries are highly vulnerable to economic recessions. The Canadian Locomotive Company has employed as many as 900 men when it was active but today is almost closed down. It seems most improbable that a plant of this size will remain vacant for any length of time, but finding new uses for the property is not likely to be easy. The shipyard and the activities centred on ship repairing have been particularly important because they are normally busiest in the winter. These will probably suffer a reduction in activity due to the canal boats, to which they principally catered, being rendered obsolete by the opening of the St. Lawrence to large ships for which there are not service facilities in Kingston.

In addition to manufacturing and service industries a third but less significant reason for Kingston's importance is its special relationship to eastern Ontario. Being the largest city within the Montreal-Ottawa-Toronto triangle, a large part of that area looks to Kingston for a variety of services and facilities which are not available locally and for which the large metropolitan centres are too remote. Many of the wholesale, retail and professional facilities and some of the institutions derive a good part of their activity from meeting the requirements of this wider area. If eastern Ontario were more populous and prosperous, compared to other parts of Ontario, this function as a regional centre would be considerably more important.

The character of the main types of employment is also important in other respects. Although earnings in some of the industries are good, there are no industries which can really be called high wage. The industrial plants employ mostly semi-skilled workers and the proportion of employment of an unskilled or of assembly-line nature is not great. Some of the institutional employees are very well paid and general wage levels in the institutions, which traditionally have been low, in recent years have been rising faster than wages generally. For many who are employed in the institutions, the alternative in other centres would be seasonal work with higher wage rates but possibly lower incomes, such as the needle trades, assembly line work, domestic service or waitresses and labouring.

Generally in the urban centres of eastern Ontario comparable to Kingston there is some unskilled and unstable factory-type employment. For

Kingston the low proportion of this type of employment is accounted for by the concentration of institutional employment. While rates of pay on a weekly or hourly basis may be lower for comparable types of labour, labour evidently prefers the alternative of institutional employment which offers greater security and perhaps better annual income, together with perhaps a more desirable type of work and better working conditions. Certainly for both the community and the individual there may be "social" advantages in better home life and greater stability in having institutional employment available. For those who for one reason or another, such as age or physical disability, cannot effectively compete for the better paid industrial jobs, or where two members of a household work, institutional employment may be preferable to alternative types of work.

There is apparently a need for industrial opportunities for semi-skilled female labour, for which the demand has been limited.

One piece of evidence that Kingston has a healthy economy shows in the quality of the labour force as indicated by its level of education. Given the character of employment in Kingston, the large proportion of the population with a high standard of education is not surprising. What is also important is that the general level of education is high.

TABLE IV

EDUCATIONAL LEVEL OF LABOUR FORCE
(EXPRESSED AS A PERCENTAGE)

No. of year. Education	*Kingston*	*Brantfor*	*Oshawa*	*Londor.*	*Belleville*
0 - 4	1.4	2.5	3.0	1.8	2.0
5 - 8	28.6	42.2	42.1	31.3	33.8
9 - 12	46.1	43.8	44.9	48.6	46.9
13 -	23.9	11.5	10.0	18.4	17.3
Total	100.0	100.0	100.0	100.0	100.0
Total labour force	14,691	16,166	18,383	43,156	8,404

Source: Census.

Future Growth

Any forecast as to what the future holds can only be an informed guess, and the further ahead one looks the greater the possibility of error. Kingston's future will depend in large part on what happens to the Canadian economy as a whole. If difficult times should return, then Kingston will suffer along with the rest of the country, although probably not to the same extent. On the other hand, if there is general prosperity, barring some unforeseen factor, Kingston should share in that as it has in the recent past. Indeed, in so far as a wealthier and more complex economy requires more "service industries," Kingston would appear to be in a particularly favourable position to benefit from such change in the emphasis of economic activity, through greater demands for its medical, research and educational facilities. The military establishment can be affected considerably by the changes in the international situation. This is an unpredictable factor and may make for expansion or contraction. Because the establishments in Kingston are concerned with either the technical or educational aspects of national defence, the general trend towards increasing complexity in military technology should increase the importance of Kingston as a military centre. Generally Kingston's existing manufacturing industries are very modern and of a type which is likely to grow. As a location for industry Kingston offers many advantages with a central location, a good labour force, many specialized facilities, good communications, and unlimited water supply. It seems probable that industrial employment will continue to expand. A factor inhibiting growth is the combination of topographical problems and institutional land holdings which make it difficult to find industrial sites of any size within the city. Outside the city boundaries there is no fully serviced land for development and there are problems in securing sites for any sizeable development. These problems can be solved, at least partly, with time.

The prosperity of Kingston will also depend on the degree to which Eastern Ontario shares in any changes in the Canadian economy: whether it goes ahead faster or slower than the country as a whole. It is beginning to appear as if the main impact of the St. Lawrence Seaway will be felt elsewhere and the Kingston area will benefit chiefly indirectly. The limited population and manufacturing of eastern Ontario is not sufficient to call for any extensive use of shipping, in fact even package freight has almost vanished in the region. It is more likely to be a matter of larger ships going past faster than any significant development as a port.

A prediction of what the population will actually be at a future date depends on many factors. The best that can be done in the circumstances is to examine past growth, and the reasons for that growth, and then to see if there are any reasons for believing that these trends will not continue in future; and if not, in what direction and to what degree the changes are likely to be. For the Kingston area there appear to be good reasons to expect prosperity to continue. In terms of population there are three reasons for estimating a somewhat lower rate of growth for the future, all of which also apply to the country as a whole; immigration is not likely to regain the high levels of 1946-57; changes in the age composition of the population will probably

mean a lower birth rate for the next ten years; and we cannot continue to expect the economy to continue to grow indefinitely at the rate experienced in the boom years 1946-1958.

The technique used has been to project a rate of increase for the Kingston area (being the City and the adjoining Kingston and Pittsburgh townships) using a range of 2¼ per cent per annum and 3¼ per cent per annum, the latter being slightly more than the average rate of population increase for the past seven years. These give populations for 1980 of 108,000 and 134,000. The estimates made for the Royal Commission on Canada's Economic Prospects (the Gordon Commission) predict certain population changes for Ontario cities for the year 1980. If the population of the Kingston area increases at the rate as is forecast for Ontario cities generally, the figure is almost identical with the average of the two rates of growth: 121,000.

For the City proper a slightly different technique has been used for two reasons. In the first place, the population of the City is and has been growing less rapidly than that of the area as a whole. For the past seven years the average rate of increase has been only 2.3 per cent. As a result, allowance has been made for lower rates of increase—a 2 per cent minimum and 2¾ per cent maximum have been used. The second factor is the limited amount of vacant land available for building. Using the higher rate of growth it is estimated that the area within the present city limits will be substantially built up by 1970 when the population is estimated at 67,000. Using the lower rate it is estimated that this will not occur until 1973, when the population is also placed at 67,000. From then until 1980, a slow rate of growth of ½ per cent is forecast with a population of 70,000 reached in 1980. The exact population figures and the rate of growth will depend in part on how services are extended to new areas, if large serviced areas become available outside the City limits, and the population density. If the trend towards apartments continues, higher figures are possible. At some point, perhaps about 1980, the population may actually stabilize or even begin to decline. This actually happened for the old city immediately prior to annexation.

Any change in the city boundaries will increase the proportion of the population growth of the area taking place within the city limits.

Also as roads improve and living habits change, the amount of growth taking place outside the City and the two adjacent townships will increase. There is already a significant development in Ernestown Township to the west partly created by the Canadian Industries Limited plant. The scattered urban-oriented population in the surrounding townships probably amount to several thousands already and is growing steadily.

TABLE V

POPULATION FORECAST

	Kingston Area		*City of Kingston*	
Year	*Maximum Population*	*Minimum Population*	*Maximum Population*	*Minimum Population*
1959	70,710	70,710	50,661	50,661
1960	73,250	72,120	52,050	51,670
1965	85,500	79,630	59,500	57,000
1970	100,000	88,060	67,000	62,700
1975	116,000	97,480	69,000	69,000
1980	134,000	108,000	70,000	70,000

Source: *A Population Forecast for the Kingston Area and the City of Kingston*, City of Kingston Planning Board, Rev. Ed., 1960.

Financial Implications of Growth

The prospect of continued growth of Kingston and the Kingston area has implications for the finances of the municipalities in the area. This is of special relevance for this study because the planning for the extension and improvement of services requires some estimate to be made of the demands for additional services and of the resources available to finance them. Also the urban renewal proposals entail some expenditure by the City on both current and capital account.

Exact comparisons of the finances of municipalities are practically impossible because of the variety of local circumstances and services rendered. In 1958 the Kingston tax levy was $4,825,750 or $100.78 per capita. This was about average for cities in southern Ontario between 40,000 and 100,000 population. As for the actual level of taxation, when account is taken of inflation, present levels, while more than double the unusually low level existing in 1942-46, are only about ten per cent above those prevailing in 1933-37. Any comparisons must take account of the greatly improved standards of service and the greater ability to pay taxes today compared to that of twenty-five years ago. It can then be safely said that the level of municipal taxation is not unreasonable. This is supported by the high level of tax collection.

The other important relevant aspect of the City's finance is the debt. The gross debenture debt at the end of 1958 was $16,021,000 or $337 per

capita. However, to give a more accurate picture by arriving at net burdensome debt, a deduction from this of the sinking fund, public utilities debt and the owner's share of local improvements (which are only a contingent liability) should be made. The net burdensome debt which is a charge on the tax levy (although government grants are receivable on a substantial part of it) is $10,518,000 or $220 per capita. These figures are high but not beyond favourable effective interest rates on its debentures. The debenture debt has grown rapidly in recent years because of a number of factors: catching up with the arrears of public works postponed during the depression and war years; the extension of services to new areas, particularly in the period 1952-58 in the area annexed in 1952 to bring them up to the same standard of services as the rest of the city; the increase in the population, and particularly the high birth rate, has meant a large school building programme; and general prosperity with a higher standard of living has meant that citizens demand a higher standard of services. The largest expenditures have been on the trunk sewer system, sewage plant and local improvements. The period when debentures being issued greatly exceeded debentures redeemed is now past and some reduction of the net burdensome debt is foreseeable so that there will be some borrowing capacity available should it be needed to implement the recommendations of this report. In addition the growth of the city brings with it increased taxable resources. The danger is that too rapid a growth may strain its finances.

The protection of property values and making the city a more efficient, more prosperous and pleasanter place in which to live are prime responsibilities of the civic authorities. Wise expenditures in these directions can in part be recovered through the increase in the taxable assessment which will result from the greater prosperity of the citizens and through attracting new business and industry. It is becoming increasingly recognized that one of the powerful factors influencing industries in choosing a site for a new plant is the general agreeableness of the city and a good standard of civic services, because this means a good quality labour force and higher productivity. More directly, urban renewal means protecting and even increasing the values of existing properties. In this way the tax base can be increased using existing services which are already paid for rather than by the expensive process of extending services into new areas.

V. PROBLEMS AND PROPOSALS

Kingston is older than most Canadian cities yet it has remained relatively small. Population growth has been steady but not spectacular. Although, since World War II, Kingston's population has increased by half as much again it remains a community of stability and character rather than "bigness". Nevertheless, the same inexorable pressures of growth now so characteristic of North American cities are affecting Kingston, and will continue to do so in the future. By 1951, the City population had spilled over its boundaries in several directions in the form of new subdivisions with low standards of services. The result was a large annexation in 1952 which added 5,585 acres and 9,000 people to the previous 1,900 acres and 33,000 people of the City. The costs of municipal services for the new areas including a sewage disposal plant, major trunk sewers and watermains were assumed by the City. Notwithstanding this substantial extension, which almost quadrupled the area of the City, new subdivisions have continued to form outside the new boundaries and today, eight years after annexation, there are almost as many people living outside them as there were in 1951. As then, the new subdivisions have a low level of services. Furthermore, with the exception of the large concentration of LaSalle Park, suburban growth has been characterized by a much greater scattering of development especially in Kingston Township. Comparison of the 5 maps, showing the history of development (see page 4) indicates the explosive nature of Kingston's population growth during the last few years.

Ever since the 1952 annexation there has been a steady shift in population balance from the City to the adjacent townships; one per cent per year for the last five years. In 1960, the City contains approximately 80 per cent of the population, while Kingston and Pittsburgh Townships have 15 and 5 per cent respectively. By 1970 the City will probably have little land left for development and after that date it is to be expected that the Townships will fairly rapidly overtake the City in population growth. By 1980 when the area's population will probably have reached 120,000, over half the population may well be living outside the present City limits. It is obvious that planning for Kingston will have to be in a regional context ir some of the problems associated with the 1952 annexation are not to be repeated in even greater measure a few years from now.

Irrespective of municipal boundaries, the present City of Kingston will continue to exercise an increasingly important role as a regional and, in some respects, a national centre. Although there are some important industries in and around Kingston, its chief function is as an educational, military, administrative, cultural and service centre. Appreciation of this fact is essential to an understanding of the City's place in its regional setting. As the population of Greater Kingston expands, the provision of land for new housing and industrial areas within the present City will become of decreasing significance, while the growth of institutions and government administration will be of ever increasing importance to the City's economic structure.

Kingston contains many institutions of national as well as regional importance. Located in or near Kingston are the Royal Military College, the Canadian Army Staff College, the National Defence College, Barriefield Military Camp and Eastern Ontario Defence Headquarters. There are also four federal penitentiaries, two within the City limits. Queen's University attracts students from all over the world, as does Regiopolis College for Boys. Also established in Kingston are various Dominion Government regional offices such as Veterans' Affairs, Income Tax, Customs and National Employment Service to mention but a few. Provincially, it contains a large group of hospitals for the mentally ill and it is also the regional headquarters for the Department of Highways. The City is the administrative centre for the County of Frontenac. It is also an extremely important non-governmental regional centre. Two large general hospitals with the most modern specialized facilities, together with other associated medical institutions, serve an extensive region of eastern Ontario and northern New York State. It is an important commercial, cultural and educational centre for the surrounding region. It is important as a labour pool even to industries located beyond the City limits. In Old Fort Henry, maintained by the Provincial Government, Kingston has an attraction that each year draws thousands of tourists. The complete list would be much longer.

It is unlikely that Kingston, within its present boundaries, will ever become an important manufacturing centre, although additional large industries can be expected in the region. As an institutional, educational and cultural centre, however, Kingston can expect steady expansion and continued stability.

Elsewhere, the Survey proposes that Kingston would make a magnificent setting for a Canadian Festival of the Arts. Because of its importance as an educational and institutional centre and the beauty of the site on the lake, the City could attain great importance as a national festival centre.

It would appear to be inevitable that within the next 20 years the City should assume the major responsibility for the administration of services for a population of some 120,000 within the Greater Kingston Area. For example, there already appears to be a need for an integrated regional school system for both the City and the adjacent Townships. Before the new high school in Kingston Township was built in 1957, pupils from the area attended the centrally located City high schools by an arrangement with the Kingston Board of Education. Under the present system students in Pittsburgh Township are now obliged to travel across the City to attend the new high school at LaSalle Park. If similar unsatisfactory situations are not to develop in other areas of municipal service, the City must take an active interest in the preparation of a plan of development for the City-region. Other matters which will require regional consideration and action are sewage disposal for the Greater Kingston Area, water supply, air transport and improvements to the regional highway system. Kingston is not large enough to afford the luxury of a metropolitan form of government, and problems of urban growth can be solved only by the City assuming responsibility for the City-region.

Within the City, the planning problem is much more complex. Although the Annexation Area is being developed in reasonably good order, there is a serious task in the redevelopment of the Old City. Nearly all cities have a substantial area of decay on the fringe of the central business district. This area of deterioration constitutes a sort of "no-man's land" between the downtown area and the twentieth century residential districts. Such areas were often very good residential districts in the nineteenth century, and even now have many people living in them. The worst deterioration occurs most frequently when there are commercial and industrial intruders mixed with the older houses. They are poor living areas and conditions are made worse because residential property owners are reluctant to spend money in maintaining their buildings on the assumption that change to commercial use is inevitable. In every city it can be shown that many such assumptions are falsely based. Squalor, inefficiency, low tax revenues and high municipal expenditures are characteristic of the central twilight zones.

The Survey has revealed the existence of serious blight in the central area of Kingston, especially at the bottom of Princess Street. Due to the barrier of institutional buildings between Johnson and Brock Streets, Old Sydenham Ward has been spared much of the deterioration usually associated with residential districts adjacent to the central business district. On the north side of Princess Street, however, there is serious evidence of blight. Although this deterioration occurs in a rather scattered fashion it is found at a considerable distance north of the central area—in fact in numerous small patches throughout the Study Area north of Princess Street and east of Division Street.

Bad Housing

There is some bad housing in Kingston. It does not become dignified when called "substandard housing"; it does not become less wretched when claims are made that "there are no slums in our town". The Survey shows there are many houses which are overcrowded, seriously lacking in sanitary facilities, dangerously exposed to fire hazards or in a state of disrepair. Some houses suffer from all these deficiencies. This is not the first time such conditions have received attention in Kingston. In 1947, a housing survey revealed a serious situation. No action of any kind resulted from this early survey since it was considered not to be of sufficient public interest! That this attitude is changing is evident from the attention that has been focused on the subject by the local press, by the statements of individuals in responsible positions, and three years ago by the appointment of a Special Committee on Housing to investigate substandard housing conditions and the possibility of redevelopment. Recently, there has been: a special survey of the Rideau Heights area; the decision to conduct the Urban Renewal Survey; a housing needs survey; and the initiation of the 71-unit Rideau Heights subsidized low rental housing, now underway. These are all steps in the right direction and a necessary preliminary to the actual removal of bad housing.

An unusual manifestation of the problem of bad housing in Kingston is the manner in which such housing is scattered in small pockets over a wide area. Although bad housing conditions are nearly all confined to the Study Area, nowhere are there substantial areas in which all the houses are in poor condition. This fact contains advantages and disadvantages. Wholesale clearance and redevelopment can be very disruptive to an old, well-established neighbourhood; the clearance of small dispersed pockets will avoid this difficulty. On the other hand, it is much more difficult to devise a clearance and redevelopment program on such a piecemeal basis.

General Housing Objectives

A continuous supply of new housing will be needed to take care of the requirements of Kingston's expanding population. At present the City is in a very favourable position in this respect. Three years ago when it appeared that the supply of building lots would dwindle under the impact of the City's new subdivision policy which made the financing of services wholly the responsibility of the developer, the City wisely entered into an agreement with the Federal and Provincial Governments for the establishment of a land assembly scheme which would provide 244 serviced lots at cost to owner-builders. The success of the project, known as Polson Park, is apparent, two thirds of the lots having been sold within two years of the scheme's inauguration. At this rate, the supply of lots in Polson Park will be exhausted within another year or so, but fortunately arrangements are being made to start a new scheme on adjacent land owned by the Department of Justice. This land includes about 270 acres which should with adequate planning provide a steady flow of building lots for some years to come. In addition to these projects, it is obvious from casual observation that there is also land in sufficient quantity in and around Kingston for the building of higher cost homes. It would therefore seem that there is adequate housing for middle and upper income groups both within and without the City limits.

A promising start in the provision of housing for lower income groups has been made with the 71-unit subsidized low-rental project in Rideau Heights. The number of units in the project resulted from the findings of a housing needs survey conducted by the Housing Branch of the Department of Planning and Development. As yet there is no sure way of knowing if this number of units will be sufficient, but experience elsewhere indicates that once such a project is built and can be seen the number of applicants usually far outnumber the supply.

Since it is a condition of federal and provincial assistance that there must be alternative housing accommodation for families displaced by redevelopment, and since the Report indicates that it will be necessary to demolish a certain amount of substandard housing, for some time to come there will have to be a supply of public low rental housing over and above that now being built in the Rideau Heights project. This Report indicates elsewhere the approximate total number of dwelling units which should be removed and how many new ones will be necessary to accommodate displaced families. Decisions as to timing and location however must be made in accordance with approved redevelopment plans. It is anticipated that the Housing Authority will be in a position to invite applications for tenancy in the Rideau Heights project by July of 1960. The number of applications, together with the locations of the applicants' present residences, should determine how much further public housing will be needed and when.

In the special section on Rideau Heights, a proposed redevelopment plan assumes it will be possible to reserve a certain number of dwelling units for families within the project now under way. However, if the Housing Authority is able to fill all units immediately, it is obvious that provision will have to be made for an addition to the present project. It is important for the City to have enough land for public housing. The City is fortunate in this respect since, in addition to the 5.5 acres occupied by the present project, there are 35.35 acres of adjacent publicly owned land. It is recommended that the City continue to reserve this land for future public housing projects. Although some public housing could be constructed on cleared sites in the redevelopment areas, it would be wise to assume that much of it would be used for other purposes, such as road improvements or more appropriate commercial or industrial uses.

Essential to the elimination of bad housing conditions is the adoption and firm administration of a Housing Code. Money spent on public housing and redevelopment is wasted if the causes of bad housing conditions are not removed. One prerequisite to the elimination of slums is a steady supply of housing at prices or rents which people can afford. The other is to maintain the existing housing stock in good condition. This latter can be done through the enforcement of a minimum standards housing code and a neighbourhood improvement program.

Rideau Heights

Rideau Heights is in the north-eastern part of the City. Although not well-known to most Kingston residents this area has received considerable publicity because of its alleged substandard housing. Rideau Heights represents a problem of fringe development which is common to many Canadian cities but which has received little attention outside of Kingston. It is to the credit of the City that it has recognized the problem and has been working out a careful scheme of redevelopment, which it is hoped will achieve happy results for an unusual situation.

Rideau Heights developed shortly after the War as a "do-it-yourself" housing suburb outside the City limits. Lots were extremely cheap, taxes low and housing regulations apparently non-existent. There were no municipal services until 1954 and

1955 when water was put in. Numerous squatters put up shacks; others built homes which would be a credit to any community; the majority fell somewhere in between. About half of the area is subdivided into lots having 80 feet frontage which will make sewerage very costly to owners. Until recently the area was remote from sewers, but in 1959 a trunk sewer was laid to the public housing project. A survey made in 1957 revealed that of 279 houses 188 or 68% were definitely substandard.

In spite of the large proportion of substandard housing, the area possesses a remarkably high degree of community spirit. Social organizations are very active, parents and children are proud of the two new schools, and the area enjoys a healthy geographic situation with a beautiful view of the Great Cataraqui River. Obviously any scheme of redevelopment will have to take into account the peculiar mixed nature of the housing conditions and the strong social solidarity of the residents. The essential first step towards redevelopment has already been taken with the construction of a nearby subsidized low-rental public housing scheme. The Report suggests a scheme for the redevelopment of part of the area which it is believed will achieve a satisfactory improvement to the area's physical appearance with a minimum of social disruption.

Neighbourhood Conservation

Redevelopment of substandard housing areas by means of clearance and rebuilding can be costly and disruptive. The price has to be paid, but it should be remembered that many deteriorating houses were not properly built in the first place and others were built in the wrong place. There are deteriorated houses which might have had many more years of useful life if they had been properly maintained and overcrowding prohibited. It is a waste of money and physical resources for a community to permit shoddy building or conversion and the needless deterioration of its greatest asset—its stock of livable housing.

To prevent needless deterioration of housing areas which are basically sound, a program of neighbourhood conservation is essential. Such a program will require resolute action on the part of the City as well as the residents. There is no good reason why many of Kingston's charming old neighbourhoods cannot continue to grow old gracefully and at the same time be gradually rejuvenated.

Municipal action may take the form of a minimum standards housing code together with adequate enforcement of building and zoning regulations. In addition, encouragement should be given to the formation of voluntary neighbourhood groups who will undertake measures designed to encourage high standards of maintenance by property owners, householders and tenants. Assistance could be made available to such groups by the Planning Office through the dissemination of information and the preparation of plans of neighbourhood improvement. Fundamental to the success of a program of neighbourhood conservation will be a close collaboration between the neighbourhood citizen group and the City Administration.

Old Sydenham Ward

Wedged between City Park and the Central Business District is a residential area of most unusual charm and character known as Old Sydenham Ward. It contains what are undoubtedly among the finest early 19th century residences in Canada. It also enjoys a very strategic location adjacent to City Park, MacDonald Park and the Waterfront, Queen's University and the central shopping area. It has been protected from any great commercial encroachment by a barrier of institutional buildings along Johnson Street including St. George's Cathedral, the Masonic Temple, Hotel Dieu Hospital and St. Mary's Cathedral.

Unfortunately, its age and its very proximity to downtown makes it vulnerable to the processes of decay. There has been a minor infiltration of commercial uses allowed by an unwise zoning by-law. There is a serious lack of off-street parking for residents at night and during the day the streets are lined with overflow parking from downtown; and too many properties have been allowed to run down. Nevertheless, the area is essentially sound, and a few well-directed measures should ensure its continuance as a high-class residential district enjoying a remarkably high degree of convenience and amenities. The application of a Housing Code, the formation of an active neighbourhood organization, and better zoning protection would enable the Ward to continue to be one of the finest urban neighbourhoods in North America.

Redevelopment Procedures

It would be well at this point to state the procedure which must be followed if comprehensive redevelopment is to take place. The first requirement is the adoption of a comprehensive plan of city development based on appropriate planning studies. These studies form the basis of this Report. An official plan is already in effect for the 1952 Annexation Area. It will be necessary to adopt an *official plan* for the Old City. Then there will be one comprehensive plan for the whole City.

The second step is for Council to *designate redevelopment areas* with the approval of the Min-

ister of Municipal Affairs and, if it is to be a partner, the Dominion Government. Council will then have authority to acquire land within the redevelopment areas and it may clear and prepare such land for redevelopment.

The Council must also adopt a *redevelopment plan* for the redevelopment area with the approval of the Ontario Municipal Board. The redevelopment plan must conform with the official plan and also be approved by the Dominion Government if it is involved. Council will then be able to receive authority to construct buildings, sell, lease or otherwise dispose of such buildings or land in conformity with the redevelopment plan.

Provincial and federal financial assistance for redevelopment is quite generous. Generally speaking, a total contribution of 75 per cent of the cost of acquisition and clearance for redevelopment purposes is obtainable from the Federal and Provincial governments; 50 and 25 percent respectively. An indispensable condition of such assistance, however, is that the redevelopment project contain a substantial amount of housing either at the beginning or end of the redevelopment process. Grants are available when non-residential land is redeveloped for residential purposes or when residential land is redeveloped for non-residential purposes. However, if non-residential land is to be redeveloped for non-residential purposes, federal and provincial financial assistance is not available. In such circumstances it is expected that the cost of redevelopment will be borne by private enterprise, by the City, or jointly by private enterprise and the City.

Where redeveloped land is to be used for housing, again generous financial assistance may be had from the senior governments. In the case of subsidized low rental housing, the complete costs of construction are paid by the federal and provincial governments; the municipality is responsible for extending services to the edge of the housing area and agrees to receive payments based on a percentage of the rents in lieu of taxes.

The Central Area

Nowhere in Kingston does deterioration appear more startling than in the lower end of the main shopping street. The heart of one block adjacent to the Market Square presents a scene of almost unbelievable desolation. The City Hall which once faced a harbour bustling with commercial activity now looks out on little-used railway tracks and small sheds where once stood a park on the site of the Market Battery. The removal of the portico from the front of the City Hall in 1957 (for safety reasons) has made the scene even more depressing. Ontario Street, once the commercial heart of the City, is now but a shadow of its former self. The interior of nearly every block in the Central Area presents a picture of decaying building and inefficient land use.

Central area blight is usually due to a number of reasons. Overzoning for commercial use allows marginal businesses to be established in lower priced residential properties just outside the main business district. Princess Street west of Division Street is an example of this process. It is also a good example of the devastating effect commercial encroachment can have on a good if old residential district. Overzoning for commercial use inflicts a double penalty—it results in the neglect of good residential areas close to downtown because the owners hope to realize the sale of their properties for commercial uses—hopes which can be realized only for a few since the amount of land actually needed for commercial purposes is seldom more than about three per cent of the total. It also results in the neglect of the older parts of the central business district which run down without new development acting as a rejuvenator.

As in cities everywhere, the central business district suffers from a lack of provision for off-street parking, yet the view from a tall building reveals an astonishing amount of unused space. The reason for this paradox is in large part due to the incoherent building of commerce on lots which were originally laid out for houses. It is the original pattern of small lot ownership which holds up the efficient development and functioning of the Central Area. For better or for worse we live in an age demanding collective action. If the present deterioration in downtown Kingston is to be halted, collective action is essential either by the affected property owners or by the City acting on their behalf. A successful redevelopment of downtown Kingston cannot be carried out by the piecemeal efforts of a few isolated individuals. What is required is reconstruction on a larger scale. This can be achieved only through united action in accordance with an overall scheme of redevelopment, with the City as an important participant..

Adequate off-street parking and relief of traffic congestion are of course basic to the efficient functioning and restoration of the central area. The City has taken positive steps in acquiring land for car parks which are operated by the City Parking Authority. *Parking alone, however, is not enough.* If the central area is to maintain its place as the main shopping centre for Kingston and region, it must also be inviting. There are many stores with attractive fronts and interiors, but this does not necessarily make for a shopping centre which is pleasing and con-

venient as a whole. Fortunately, the central area of Kingston possesses many attributes which will always distinguish it from a new shopping centre. Chief among these is the view of the water looking south on Princess Street, the Market Square and City Hall, some government buildings of excellent design, nearby churches and some fine open spaces. In addition there are the handsome stone facades of many of the stores, some of which have been restored to their original condition. With such a large share of fine features and the possibility of redevelopment at the bottom end of Princess Street, the central area should become a stimulating and enticing shopping district and one of the finest and most unique in Canada.

A proposed plan of redevelopment for downtown Kingston is contained in the Report. In accordance with this plan, two new civic parking lots on Queen and Brock Streets have already been established by the City. The building of new commercial buildings should be carried out by private enterprise, but participation by the City will be essential since the plans of private enterprise should fit into an overall scheme for redevelopment.

Redevelopment of the central area must be comprehensive, and include not only the modernization of the main shopping street but also its environs, especially the area around the City Hall and along Ontario Street. As indicated in the economic analysis which forms a chapter of this Report, Kingston has made a successful transition from trans-shipment port to service centre. Waterfront activity in the vicinity of the central area is now greatly reduced. Considerable change is proposed for the waterfront area between Fort Frontenac and the City Hall. As can be seen in the charming panoramic view of 1875, the waterfront was once a scene of bustling activity with dozens of ships berthed at the numerous quays and docks of which few now remain. There is no reason why this scene cannot be repeated in a somewhat different form. The post-war years have witnessed a phenomenal increase in the use of motorized pleasure boats. It is reported that 4,000-5,000 such craft, mostly American, entered the Rideau Canal at Kingston last year. In Summer, Lake Ontario and the St. Lawrence River are swarming with pleasure boats yet the City possesses few facilities for harbouring them. As part of the general improvement of the central area, it is suggested that a marina be built in front of the City Hall. This would be one step in a grand scheme of redevelopment which would link up the waterfront, the City Hall, the Market Square and the Princess Street Shopping District. Other improvements would include the redevelopment of Ontario Street, to stabilize the bottom end of the central business district, and to remove the causes of a decay which is gradually creeping up Princess Street. The graph of Princess Street property values on Page 79 illustrates the point.

Major Street Improvements

Rideau-Montreal Street

Considerable attention has been paid in this Report to the improvement of the central area, which from its start near the City Hall and Market Place has gradually built up around No. 2 Highway (formerly the York Road), the major inter-city route in Southern Ontario. A new orientation will occur when Highway 401 is completed and replaces No. 2 Highway as the major inter-city route. The central area has two routes which connect it with Highway 401, Division and Montreal Street. Neither can be regarded as adequate without major improvements in the form of widening and subways or bridges at railway crossings. Both streets are built up and have narrow rights of way along much of their length. As an alternative, it is proposed that a new route be established from Place-D'Armes Square. Starting at Place D'Armes Square the new route would utilize Wellington Street which would join up with Rideau Street at Bay Street at a junction effected by the removal of two or three buildings. From Bay Street north, existing Rideau Street could easily be widened on the east side and little other improvement would be needed except for a slight realignment between River and Cataraqui Street. At the junction of Montreal and Rideau Streets a new right of way would be established on the west side of the C.N.R. spur line and thence northward to Highway 401 by means of a new right of way on the west side of the C.N.R. main line except at the existing subway on Montreal Street which should become a part of the new route but which would have to be improved. A major advantage would be derived. As in the early days, the waterfront end of Princess Street, approached by the improved access route, would once more be a vital part of the central area.

Sir John A. MacDonald Boulevard

This proposed road on the west flank of the residential district known as Kingscourt has been on the City plan for many years and has been subjected to a variety of modifications. Early City plans all indicate that it was the purpose to have this road connect with Division Street as close as possible to Highway 401. The Report accepts this original idea in principle, but suggests improvements to its terminal connections at Concession and Counter Streets. In addition to the present proposed connec-

tion to Concession Street, another connection should be made to the Traffic Circle. Traffic from 401 could then proceed directly to the south-west quadrant of the City via Princess Street west, the Bath Road or Palace Road. The traffic circle intersection may have to be drastically altered: the present entrance to the Aluminum Plant in the Circle should be closed and the Aluminum Company traffic redistributed at new entrances on Sir John A. MacDonald Boulevard and Princess Street West.

Elliott Avenue, Weller Avenue.

It is proposed to divert Elliott Avenue in order to:

1. eliminate three level railway crossings between Division and Montreal Streets;
2. achieve a more satisfactory traffic flow between the industrial areas west of Division Street and on Elliott Avenue and Montreal Street and
3. steer industrial traffic away from residential areas.

Elliott Avenue should be continued west of Division Street along what is now Weller Avenue extension. Weller Avenue, at its western end, would be diverted into Elliott Avenue and the present junction with Division Street closed.

Hagerman Street.

It is essential that there be a good east-west connection between Sir John A. MacDonald Blvd. and Montreal Street at the north end of the City. This cannot be achieved by means of existing Elliott Avenue because of the interruptions caused by the three railway level crossings and the alteration of industrial and residential land use. It is proposed to eliminate these crossings by the simple expedient of having the main roads follow the railway lines. It has been suggested above that Elliott Avenue be carried along the north side of the C.P.R. branch line and under Division Street which would be elevated over it and the C.P.R. and C.N.R. tracks. Similarly, Hagerman Street would be carried along the south side of the C.N.R. main line to cross Division Street at the south boundary of the H.E.P.C. property, thus linking up Sir John A. MacDonald Boulevard and Montreal Street. The major junction thus formed at Division Street would enable 401 traffic entering Division Street to proceed directly to the south-west or south-east quadrants of the City.

Grade Crossing Improvements.

The overall proposals contemplate the elimination of four major grade crossings, one spur line crossing and the improvement of the existing subway on Montreal Street. One new crossing would have to be established to enable Hagerman Street to cross the C.P.R. It is recommended that all these improvements be considered as integral parts of one scheme and that an application for financial assistance to the Department of Transport be made on this basis since the savings would probably be much greater than by separate applications for each project.

The General Improvement of the City

Town planning is concerned with the whole physical structure of the community which is a composition of many diverse elements. The conventional attitude towards planning however, has often had very limited expression, usually in terms of zoning, housing and traffic movement and very often these have been regarded independently of one another. The creation of a community in which all development, public or private, results in community betterment can only be achieved when each element is a part of a comprehensive scheme in which the separate parts are all related. Once a comprehensive plan is developed and accepted, zoning, public and private housing, parks, traffic movement, industrial and commercial development, can all be seen in proper perspective. Without this overall guide, the processes of land use regulation, traffic control, housing, etc. can be conducted only in a piecemeal and disjointed fashion, a procedure which results in endless disputes and confusion as the placing of many elements must then lead to conflict.

A City plan for Kingston should contain the following:

(1) a comprehensive housing policy which will provide for a supply of privately-owned and public low-rental housing, and which will provide for the redevelopment of substantial housing areas (it should contain a housing code to enforce minimum standards and a program of neighbourhood conservation);

(2) a land use plan which is related to the community's residential, commercial and industrial growth, and is designed to avoid a confused mixture of conflicting interests as well as to knit together land use and the highway system.

For the most part the existing Official Plan of Land Use, which is in force only for the area annexed to the City in 1952, will serve the purpose there but land uses in certain other parts of the Old City, especially in the Study Area, will have to be carefully adjusted. The Report provides the basis for the extension of the official plan to the Old City, which should be the first step in the process of bringing policy up to date.

A major road system for the City of Kingston, in order to serve all parts of the City satisfactorily,

must be directly related to proposed major land uses. It must also extend into the surrounding region and link with the inter-city system represented by Provincial Highways 401, 2, 15, 33 and 38. On the whole, the City and region is served by a good highway system which needs only a few new strategic extensions to make it a complete interconnected network. The Survey makes important proposals in this respect with regard to the central business district, Rideau-Montreal Street, Sir John A. MacDonald Boulevard, Division Street, Elliott Avenue, Highway 38 and Highway 33 (the Bath Road).

Suggestions for improving the function and appearance of the main shopping street are made in the Report. Since all shoppers as such are pedestrians they include proposals for pedestrian ways, arcades and malls. Most of the proposals are simple enough to be put into effect without any disruption of downtown activity yet they would greatly improve pedestrian circulation and make shopping a pleasanter experience. The improvement of the central business district will, in large measure, depend on cooperative action by the downtown merchants and business men, but the City will have a big role to play in providing off-street parking and easing traffic congestion. As a result of this Study the City Parking Authority has already acquired parking lots on both Queen and Brock Streets as proposed in the Survey.

If decisions are made to engage in large-scale commercial redevelopment especially in the lower end of Princess Street, assistance may well be required from the City in order to assemble land, create parking, close streets, etc. In any event, since large-scale redevelopment will have considerable effect on the City's service and tax structure in such areas the City should be an active participant.

The enhancement of the City Hall environs and the waterfront is vital to downtown redevelopment. Kingston has always faced Lake Ontario but immediately below the city centre the land facing the lake now contains a clutter of old buildings, and for the most part their uses are unrelated to water transport. Of the medium sized cities, Kingston has the finest water approach in Canada. From it may be seen Fort Henry, the Royal Military College, Fort Frederick, the Martello Towers, Fort Frontenac, the University and Hospital Buildings; and the city silhouette with its towers and domes is impressive to those who arrive in Kingston by water, as do thousands of American tourists each year. The City Hall is in the foreground of the water approach to downtown. It would require only the removal of the C.P.R. yards and freight sheds to a more ample and modern location to create a truly magnificent open space between the City Hall and the water. The Report suggests redevelopment of the waterfront between the City Hall and Fort Frontenac along with the construction of a civic marina as an important part of the general improvement of the central area. An early step in this direction should be the restoration of the waterfront facade of the City Hall. All would agree that the City Hall is more than an administrative centre. It is a wonderful and unique symbol of the City. Its preservation should be a matter not only of civic but also national concern.

Kingston has been well named "The Limestone City" because of the many fine buildings constructed of this local building material. Queen's University has carried on the tradition of building in limestone and great care is taken with the maintenance of many of the City's old stone buildings. Within recent years, however, many limestone buildings have become victims to change, recent examples being the stone archway of the military riding stables in Place D'Armes, now occupied by a supermarket, the old stone post office on Lower Princess Street, now occupied by a gasoline station, and the immigration building at the foot of Brock Street. Many of Kingston's old stone buildings are in serious disrepair and it seems unavoidable that some of these, especially in the central area, will disappear. There is a danger, however, that buildings which are of great architectural or historical value may also be destroyed not of necessity but because of thoughtlessness. Kingston has taken steps to preserve such buildings since they form such an important element in the general character and appearance of the City. The City Council has already appointed a Special Committee on the Preservation of Buildings of Historic or Architectural Value.

THE SURVEY AND RECOMMENDATIONS

The next three Parts of the Study contain information and recommendations in the form of a series of maps and tables accompanied by appropriate written commentaries. The material gathered and classified for this part of the survey was voluminous and of necessity it has been greatly condensed and simplified. Much of the information was obtained by a field survey which in some districts involved a house to house inspection.

PART VI, which includes five sections, examines the city as a whole with respect to physical structure, population distribution, and social problems represented by the incidence of welfare cases, juvenile delinquency and police cases. Observation of the geographical location of persistent groupings indicated areas requiring more intensive study.

PART VII, comprising seven sections, is concerned with a detailed inspection of the area regarded as requiring careful consideration.

PART VIII, includes two sections, the first of which contains general recommendations for the redevelopment and future growth of the city as a whole. The second section pays particular attention to specific areas requiring redevelopment. Within the general study area, nine sub-areas were given closer study and within these sub-areas thirteen areas have been designated for redevelopment exclusive of the waterfront and central business district.

There is a key map at the end of the Report for use as a reference when other maps are examined.

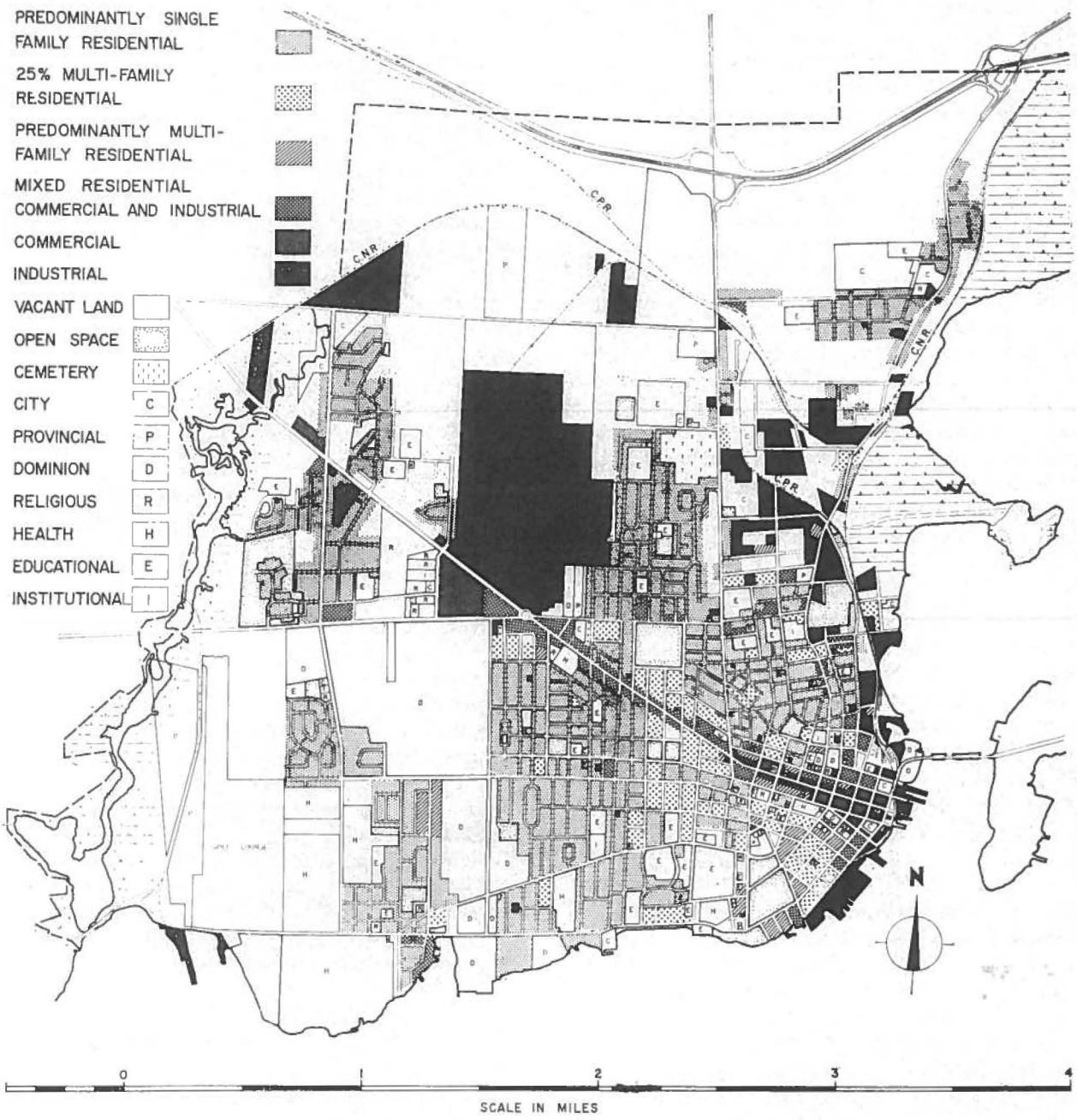


ILLUSTRATION NO. 36—MAP 3. The existing structure of the City expressed by land uses and communications. The multi-family areas correspond generally with the built-up area of the City in 1867. The largest amount of vacant land is between the built-up area and Highway 401. Of this, that in the northwestern sector is zoned for industry and in the northeastern sector for residential. In the southwestern sector, large tracts of land are occupied by various Dominion and Provincial institutions.

Source—1955 Land Use Survey, City Planning Board.

The density of population within the City varies a great deal. The greatest number of persons per acre is to be found in the older parts where many houses have been subdivided and there are apartment buildings. Generally, the City may be divided into six areas.

Sydenham Ward

Sydenham Ward (which is the complete Sydenham Ward of today) lies between the central commercial area and the University. Because it is one of the earliest sections of the City, its density has been increased by the insertion of many more dwellings than there were original building lots, and by conversions of larger houses. Even in the nineteenth century some apartment buildings were erected in the Ward which also provides a large number of living quarters for university students. With a population of nearly 60 persons per acre, Sydenham Ward has the highest density in the City. Although the buildings are close together there is a large amount of floor space per person.

Portsmouth

With early shipbuilding activity and the building of institutions in the locality, Portsmouth was settled at an early date. Some of the older village houses show internal overcrowding; in many cases the floor space per person is lower than the 200 ft. standard utilized. The average density for the area is below 25 persons per acre, but there is an average of 0.97 persons per room, showing that there must be some overcrowding.

North of Princess Street

The settlement north of Princess Street began at an early date, with North Street at one time a boundary of the City. Small settlements grew beyond the boundary but were later absorbed by the main City growth. Fewer multiple dwellings exist on this side of the central area as compared with the area north of Barrie Street, but its density is still high and the space per person considerably reduced. Many row houses exist to bring the density up to 49 persons per acre. On the fringes of this development there exist smaller houses which previously filled the role of many of today's dwellings in the Rideau Heights area—houses often below standard in finish and conveniences, and with insufficient space. The only alternative is public low rental housing.

Pre-War Housing

In general, housing before the war spread in a westerly direction from the University Area to Princess Street, and was developed at a moderate density of 30 persons per acre as against the average for the City of 33 persons per acre. Because of subdivision control and minimum lot sizes, it is difficult for further subdivision to occur, although undoubtedly apartment dwellings will be constructed in the future in some locations, notably near parks.

Kingscourt—Wartime Housing Area.

The area of housing immediately north of Concession Street has a moderate density of 25 persons per acre but some of the individual houses are badly overcrowded. Because it had to meet an emergency this housing is substandard in its floor space.

Post-War Suburbs

The newer areas of the City, west of Victoria Street and the Aluminum Plant, have no noticeable overcrowding, and the percentage of owner-occupied dwellings is very high. The density is about 14 persons per acre.

The population of the City is at present about 50,000 persons. Its most rapid growth has been experienced since the beginning of the last war when the coming of the larger scale industries boosted the economy and the population. Since the war Kingston has grown at a rate of approximately 2.5% per year, with the suburban or outer municipalities increasingly taking more of the residential growth. With a continuation of this rate, most of the available vacant residential land within the City will be developed by 1970, and the City's population will be approximately 70,000. Any further change will be caused by redevelopment within the older sections of the City.

The probable density of new areas will vary with their location. No doubt the medium and higher priced houses, with lots which average 6,000 square feet each, will be found in the western section of the City with densities of approximately 15 persons per gross acre, including schools, parks and roads. Medium and lower priced houses may be located in the northern sections of the City where a higher density can be expected. Here the lots will probably average 3,000 square feet in area which would result in a gross density approximating 25 persons per acre.

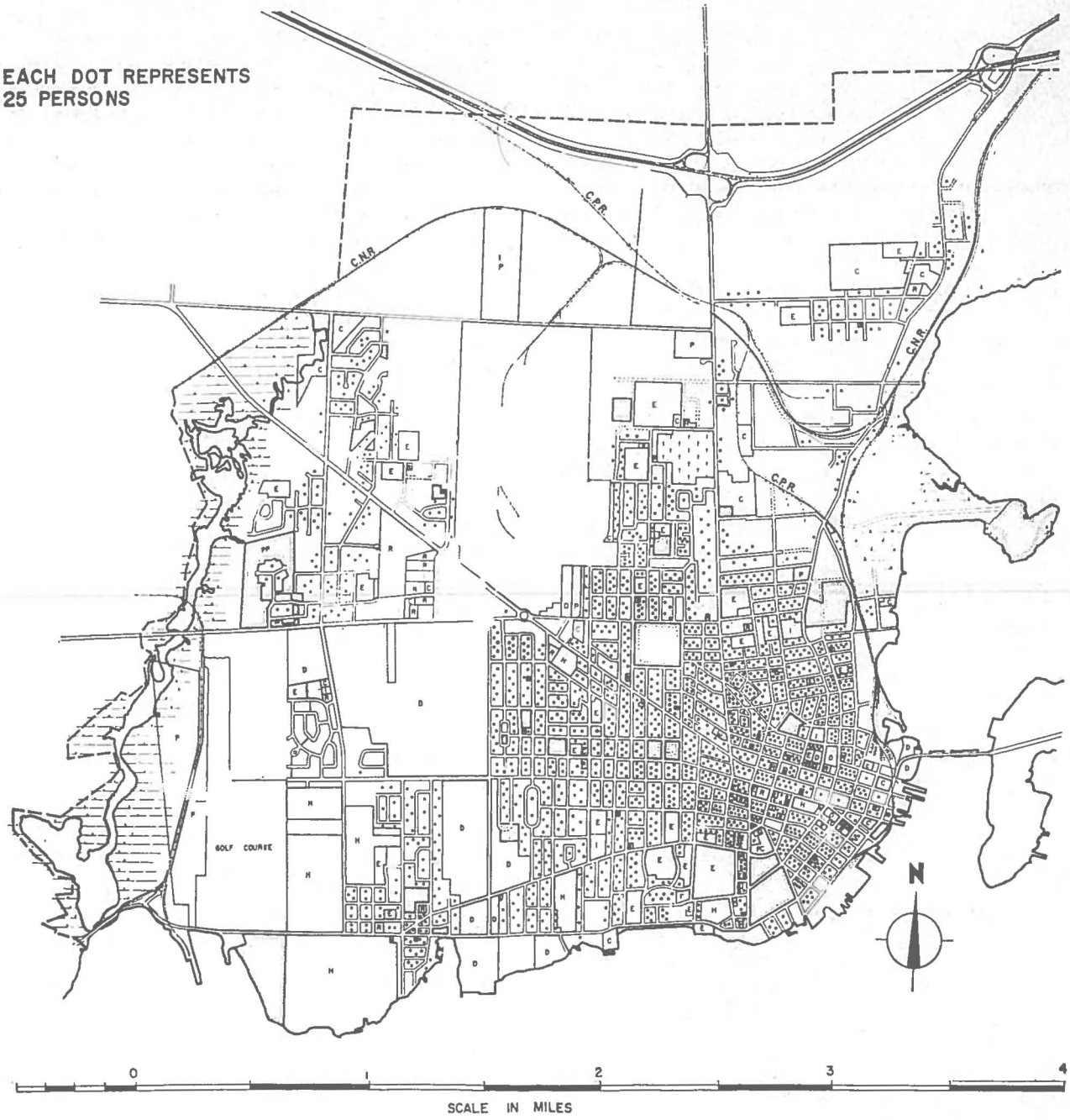


ILLUSTRATION NO. 37—MAP 4. The distribution of population in the City shown diagrammatically. It can be seen that there are concentrations of people in the vicinity of the central business district. It is also evident that the outer residential areas of the City are at relatively low density.

Source: Unpublished Population Report, 1956, City Planning Board.

The information concerning relief recipients was obtained from the City Department of Social Welfare. In plotting the cases on the map no differentiation was made between the various categories. In all, there were 109 cases handled in June, 1958 which was regarded as a typical month.

The relief recipients are divided into a number of categories. It might be worth noting these groupings though they have not been considered when plotting cases.

1. *Unemployable—*

male head	—	8 cases
female head	—	25 cases
single male	—	11 cases
single female	—	18 cases

This category includes those who by reason of health or physical disability are unable to find work (generally a medical certificate is required) and widows or deserted wives with children who by law do not have to work and need a source of income. In the latter case the recipient may be working part or whole time yet still is classed as unemployable for relief purposes.

2. *Employable (unemployed)*

male head	—	16 case
female head	—	5 cases
single male	—	7 cases
single female	—	2 cases

In these cases relief is usually in place of unemployment insurance (or in addition to).

3. *Non-Shareable*—17 cases.

These recipients are not covered by Provincial relief. Generally they are people who need a small sum to tide them over a short period of time. Often the recipient is a transient.

The map indicates a decided concentration of relief cases in the area north of Princess Street. There are individual cases elsewhere, and isolated groups of 6 or 8 cases.

In general, the greatest concentration of relief cases is found where poor housing is most prevalent. In the newer and better areas of the City relief cases are practically non-existent.

For recurrent cases in the Welfare Department, there is continuing evidence of a connection between the cases and poor housing. Because of their poor economic conditions, persons on relief are forced to obtain the lowest standard of accommodation available and if they are ejected, try to find accommodation similarly poor. However, they are not in a position to question what may be an extortionate rent for substandard living space, and often pay more comparatively for their accommodation than tenants in better dwellings.

One typical family lives within a very poor group of houses (Ontario Street) located near heavy industry; the accommodation itself is ranked as poor in condition, and the dampness of the building is most unhealthy. There is a total of 8 persons in the family and the 6 children range from 6 months to 14 years of age. They occupy a total of 5 rooms in rented accommodation. The husband, on relief for 2 years, is classed as an employable unemployed, but in fact is mentally retarded and has little hope of steady work. Poor housing conditions here may be partly responsible for the fact that some children of this family have been in trouble with police.

Some families in outer residential developments (Rideau Heights) are also badly situated. One particular family with 9 children lives in a 3-roomed shack, which they own. There is no water available. It appears that the husband will not work steadily, so that conditions will not improve. In this case also there have been problems with one of the children. The large families often associated with relief cases are in particular need of better housing. They cannot provide it for themselves and the children's lives can be permanently affected by their poor living conditions.

It may be argued that the association of persons on relief with poor housing conditions is not in itself cause and effect. For example, statistics maintained for a number of years by the Department of Social Welfare indicate that the number of employable unemployed registered for welfare assistance is directly influenced by the general availability of employment. It is nevertheless true that wherever there is substandard housing there also may be found a high incidence of persons barely above subsistence level. It is therefore not surprising to find that the largest numbers of relief recipients are identified with poor housing areas.

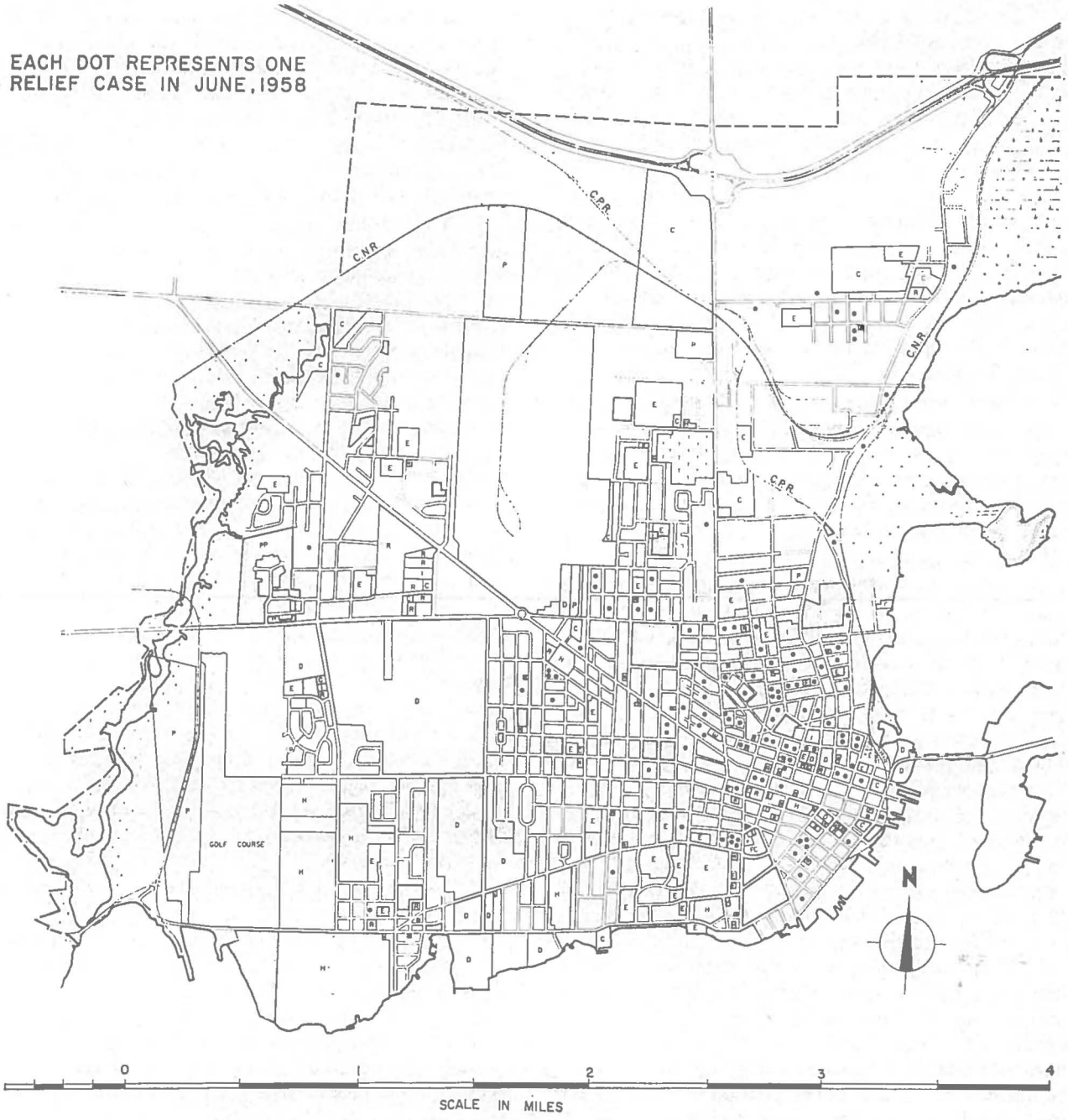


ILLUSTRATION NO. 38—MAP 5. A total of 109 relief cases were handled in June, 1958, which was regarded as a typical month. They consisted of 62 unemployables, 30 employables and 17 other cases. (i) Note that the greatest concentrations appear in those parts of the City where there is overcrowding and poor housing. Source—Department of Social Welfare, City of Kingston.

The Juvenile Court cases as such are indicative of the whole environment of the children concerned. Parents, living conditions and individual personality are all reflected in the child's particular way of life.

It is thus very difficult to separate the actions of the child from these other influences, and they all combine to provide an atmosphere where morals are often low.

Where boys are concerned in court cases, it is usually for theft (petty thieving of articles that they may not possess, such as bicycles). Real trouble begins when they start drinking to be considered equal with the others, trying to appear mature in older boy's company, and refusing to "chicken out" in any venture.

Girls' court cases again are petty thieving, usually for more feminine articles such as bracelets, rings and articles of clothing. Generally their offences tend to recur more than those of the boys. Also they are often involved in cases of running away from home for a few nights.

Family problems do not take long to influence the children, and often it does not take much more than a recession in work to make things difficult. Many of the families with whom the court deals have debts of at least one thousand dollars owing to finance companies of some type. The families are generally large and it seems to the parents that extra facilities have always to be obtained on credit. The larger the family the poorer, generally, is the living accommodation. Many family problems occur through the conflict of personalities, but there is no doubt that environment aggravates a situation that might otherwise not arise. The wife frequently becomes aggressive as a result of the husband's failing to improve their conditions or being out of work. His retaliation often consists of going out to drink it off which, far from solving the problem, takes it one stage further, and there is less money to put things right. Children in such an atmosphere will hardly pay the respect to their parents that is normally due, and in many cases will continuously be disobedient. The children may have to work part time to help support the family, which will separate them from the normal activities of their friends and make a barrier between them and their parents.

Overcrowding does nothing to help, and in many of the large families trouble often develops because the parents cannot supervise all their children's activities or show them the love and understanding that is needed. Living in meagre accommodation must inevitably mean a desire to get outside the home, and home life is then not something to be respected. The children will seek their self-expression in a way completely unrelated to the home.

Economic conditions can make life unbearable, despite municipal assistance, if the children concerned are unable to enjoy some of the normal possessions of other boys and girls. Shortages of every day needs as well as the condition of accommodation, will be the source of quarrels, violence and separations between parents which will undoubtedly affect children for the whole of their life.

While many things related to these problems are being improved, such as financial assistance, little is being done about the total environment—the removal of slums and the provision of more suitable low-rental residential areas. An obvious deficiency is the lack of open space and recreational facilities so that children have an opportunity to enjoy leisure time in the right surroundings and environment—fresh clean air as against the dank common hallways of apartments or the unsafe through traffic streets. By having well designed residential areas unaffected by nearby industries, heavy trucks and noise, the home can begin to mean something different. This would be an important step in a general improvement of social conditions.

The Juvenile Court cases fall mainly north of Princess Street, and a decided concentration of them occurs within the wartime housing north of Concession Street, itself an area poor in condition. However, a generally more important area as far as total environment is concerned is that between Montreal Street, Rideau Street and Charles Street. This district suffers through being on major traffic routes and having industry mixed with the housing; and it has little public open space available within its immediate area.

It is interesting to note that in the 5 years there were only 9 reported cases in Rideau Heights, although cases of a similar nature to those in the City may not have been reported: so that although juvenile delinquency is without doubt connected in some way with poor living conditions the openness of the development may be an advantage.

A typical case in the Juvenile Court is as follows: the family has lived in poorer areas of Kingston on sections of Queen and Montreal Streets lately, with 5 persons in 4 rooms. The family originally had 10 children, with 4 now left at home. The father was frequently absent from home and has now left. He claims it was because of his wife's aggressiveness. She says he is an alcoholic. It is interesting to note that he was an orphan raised by foster parents and that he changed his religion at marriage. He had an unsteady job for 5 years, during which time he was frequently on relief. Of the 6 children living away, 4 are in less than ideal situations and of the other two there is no news.

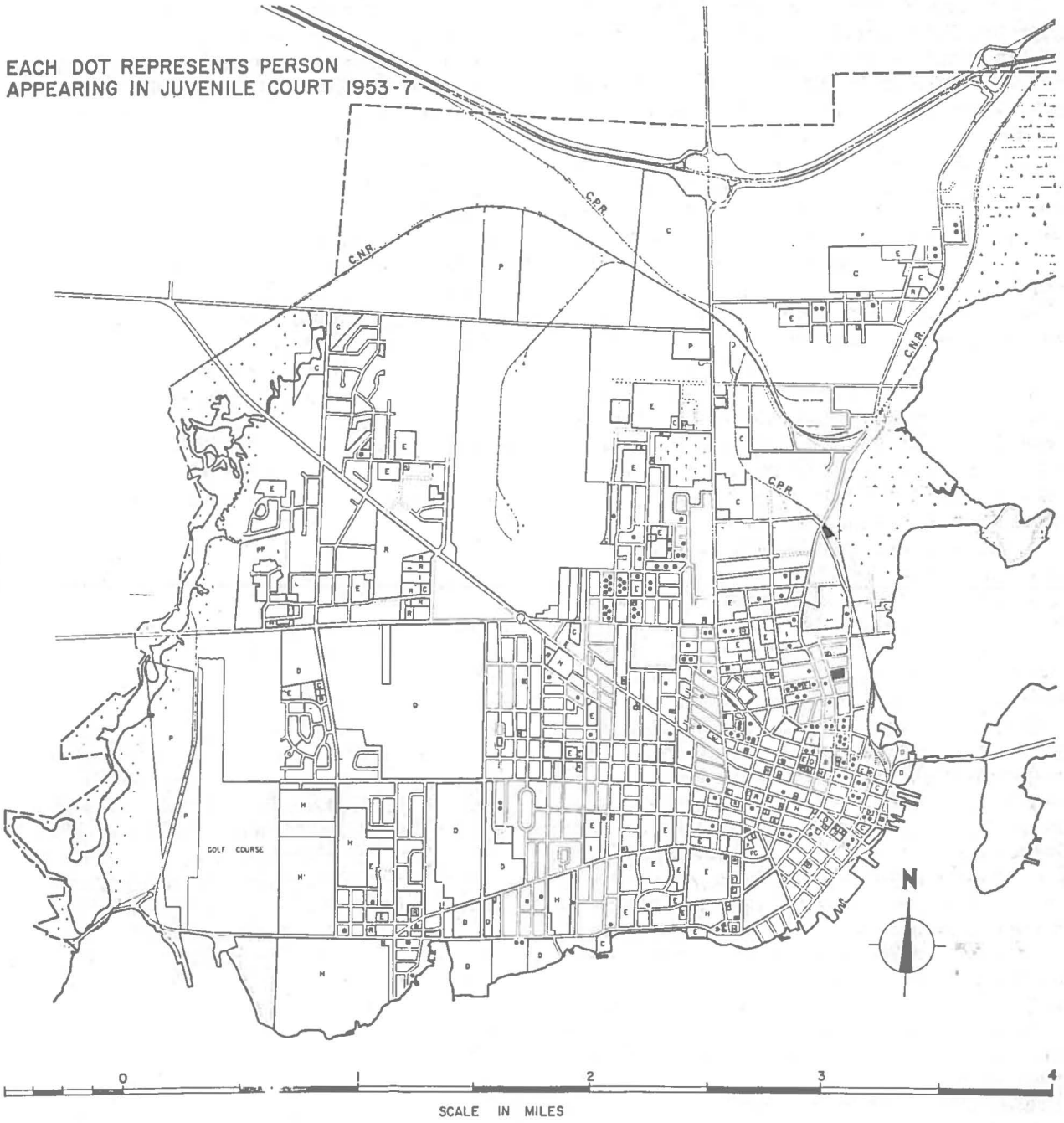


ILLUSTRATION NO. 39—MAP 6. The background of both parents and children is examined on appearance at the Juvenile Court. Few of the cases occur south of Princess Street. There were a total of 158 cases in the years 1953-7, about one-third involving people from outside the City. (ii) Again it is to be noted that the greatest concentrations appear where there is overcrowding and poor housing.

Source—Juvenile Court Records.

Information was obtained from the Magistrate's Court and Police records regarding incidents occuring under the criminal code from July 1956 to June 1958. Those involving the Highway Traffic Act, Liquor Control Act, and Local By-Laws, were omitted.

The list of names was used to discover from the Police files the offender's home address in Kingston, if any, and where the incident took place. No classification of the type of offence was made.

A map compiled of incidents, indicates a consistent grouping along Princess Street with the greatest concentration downtown, particularly in any hotel area. Outside the central area there are a number of incidents occurring among the Montreal Street housing, and in the housing on the north border of downtown. Impaired driving is an offence under the Criminal Code. Most incidents involving it are plotted on the road where the arrest was made, making a relationship to environment difficult.

The second map (Illustration No. 40) is based on the home addresses of offenders. It is more useful in establishing the relationship to bad housing, but again impaired driving cases could create a false impression in some areas. There are, however, noticeably more offenders living north of Princess Street and a strong group in some bad housing on Ontario Street. Most cases are distributed equally through the original study area north of Princess Street, with a concentration in the Wellington Street housing near Princess Street. The marked grouping of cases north of Princess Street relates to the larger number of domestic problems that occur there. Police cases in other areas are generally of a different type. As was to be remarked in an examination of cases before the Juvenile Court, the actions of parents influence their children, and the environment itself is detrimental to all. Pressures and conflicts between husband and wife become much more tense and aggressive as trouble, often economic, affects them. The man searches for an outlet outside the house but when he returns has to face the problem from which he fled, and which his wife faces constantly. When both have to work from necessity, this can also cause unnecessary friction. South of Princess Street, police calls take on a different nature and often are related to the University students in that area.

An analysis of the police cases plotted on the map reveals that 26% are major crimes such as assault, theft, and breaking and entering. 32% are caused by traffic infringements under the criminal code, and the remaining 42% are miscellaneous minor cases.

Summary of Part VI

It seems almost unnecessary to emphasize the close association between poor housing conditions and social problems such as juvenile delinquency, crime, poverty, disease, retardation and general social maladjustment. Innumerable investigations in countless communities, large and small, throughout North America and Europe have yielded abundant statistical evidence to show that bad housing is a breeding ground for social ills. It is from such areas that the bulk of social casualties arise which largely constitute the case loads of family, child care and protective agencies and result in excessive health and welfare costs. Information on the subject now appears to be reasonably complete and conclusive.

Of much greater importance is the small but rapidly growing fund of information which has been accumulated on the good results which are obtained when poor housing is removed and when families from such areas are provided with housing adequate for their needs and at a price they can afford. This is the positive side of redevelopment. In some instances the results have been dramatic with marked decreases in civic expenditures for fire protection, social assistance, public health, police protection, etc. More important are the positive gains in social well-being of the people themselves who have enjoyed surprising improvements in health, children's school work and general well-being. The following report from a group of Canadian social workers is typical: "Each time a new building is occupied it is interesting to watch the windows blossom with fresh and often new curtains. . . . Although no inference should be drawn that there are not problem cases, an unlimited supply of hot water available simply by turning on the tap, together with convenient laundry facilities, certainly produces visible results. The management has seen some startling improvements in housekeeping on the part of families whose standards left something to be desired before they moved into the new buildings. These results are confirmed by various interested agencies in the neighbourhood as well as school officials, all of whom are very familiar with the difficulties confronting families living in the overcrowded sub-standard accommodation which made up most of the old neighbourhood. Fewer fire hazards, fewer absences from school for health and other reasons, and less juvenile delinquency, are matters of fact borne out by actual results. Almost half the old dwellings were stove heated, and a frequent excuse for absence from school was that the house was too cold for the children to leave their beds. With central heating in the new units, absence for this excuse has simply disappeared."

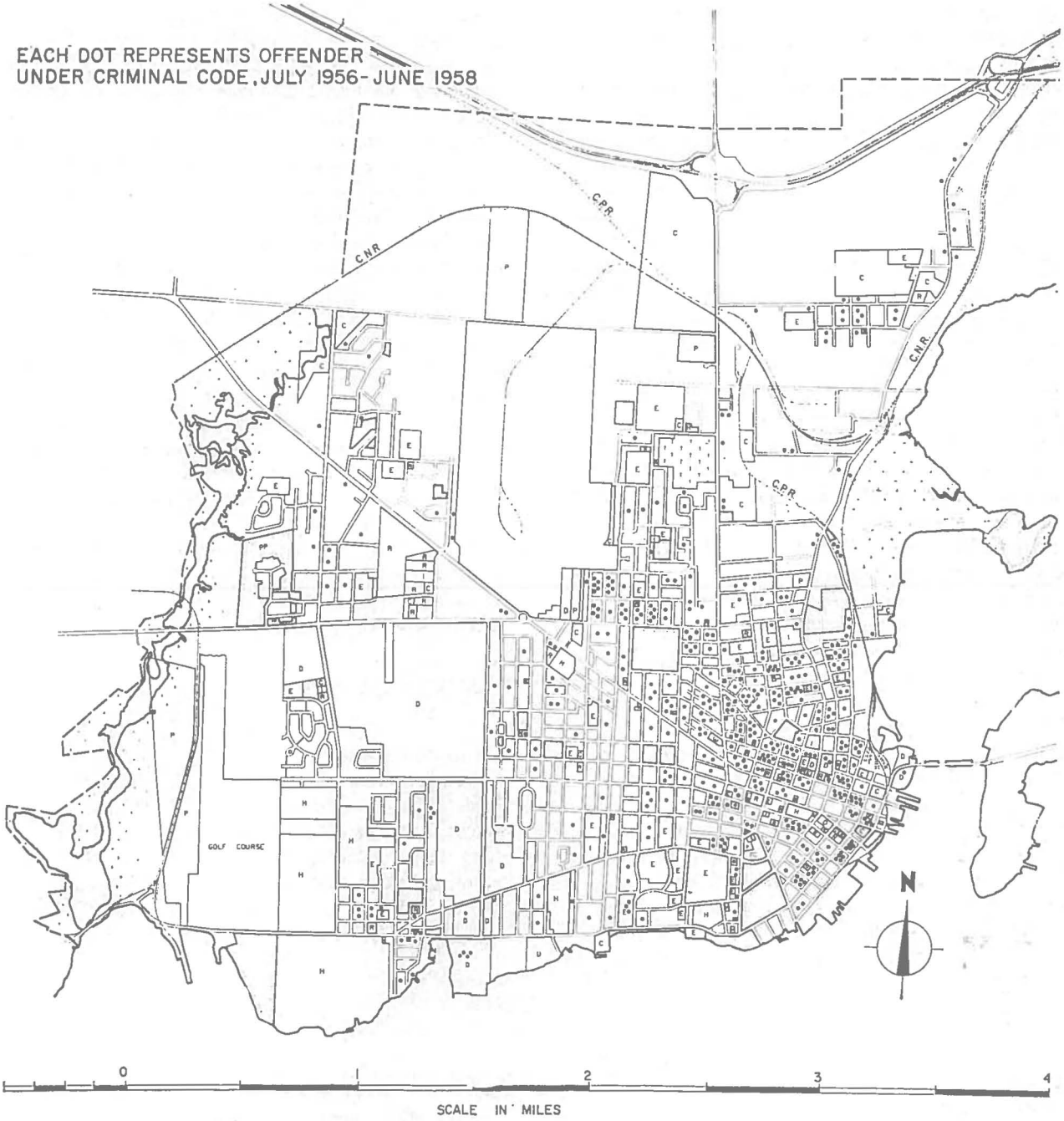


ILLUSTRATION NO. 40—MAP 7—DISTRIBUTION OF CRIMINAL CODE OFFENDERS. Each dot represents one offence. Dots are plotted in the blocks containing the home addresses of Criminal Code offenders when the offence occurred in the City of Kingston. The Study Area seems to contain the majority of cases. Although it might be incorrect to accept the conclusion that such findings indicate cause and effect the persistent evidence of such records indicate a very close relationship between social problems and bad housing conditions. Source—Police Court Records, Chief of Police.

The Building Use Map shows how buildings within the Study Area are used. Physically the land slopes upward rather gradually away from Lake Ontario and the Great Cataraqui River, although there are places where abrupt rock faces form steep gradients, and rock outcrops are not uncommon. One of the early boundaries of the City ran along North Street and connected to the projection of the existing line of West Street. Within this area, Rideau Street, a section of Sydenham Ward, and blocks adjacent to Princess Street were the first to develop. It is here that one would expect deterioration in housing conditions. However, Sydenham Ward south of the Central Area has been fortunate not only in containing good houses but also in having a buffer of institutional buildings acting as a protecting strip between it and the commercial centre.

The Rideau Street area has not been so fortunate. The industrial development has spread in rather haphazard fashion, and Montreal Street, with its winding loop to the Central Area, is inefficient for modern traffic. Commercial expansion has occurred up Princess Street, gradually receding from the waterfront, and also to the north in a more desultory way, encroaching on residential development and decreasing the desirability of the housing.

The physical layout to the north is not so favourable as that south of the central area, and from the beginning housing was of lesser quality. Major roads which connected the City to northern settlements penetrated the area, and the growth of traffic has caused a deterioration in residential conditions. Parklands have not been easily accessible, and the linear shape of the development has not encouraged the provision of community services.

In recent times certain industries have occupied old buildings and vacant patches of land. They are near to the existing industry but within the housing area. The sporadic non-residential development, generally small in scale, results from the fringe position of the area and the excessive industrial and commercial zoning, unrelated to real demands. The prolongation of the Central Area along the major highway, Princess Street, has caused it to weaken at the ends of the development at Barrie Street and King Street, where it is in decline. If it is to hold its own and expand in competition with new commercial and shopping centres, fairly drastic alterations may have to be made and car parking will have to be provided on a large scale.

NOTE: PART VII. STUDY AREA MAPS

The following maps relate to an area of intensive study selected on the basis of information shown in the previous five maps. The major part of the substandard housing is to be found in this area of the City. Most of the following maps refer to an internal housing survey made to ascertain housing conditions.

BUILDING USE
FIRE CALLS
PROPERTY VALUES
OVERCROWDING
SANITATION
CONDITION
SUBSTANDARD HOUSING

The maps in this section of the Study are based on a concentrated examination of a part of the Old City of Kingston, chosen because it is that in which redevelopment is to be expected. Deteriorating housing conditions in the area are caused sometimes by age alone, at other times by the type of use and occupancy. In some places it is the proximity of non-residential uses which has caused a particular section to become shabby or to decay.

ILLUSTRATION NO. 41—MAP 8—EXISTING USE OF BUILDINGS. The generalized land uses for the City were shown in Map No. 3 on page 39. Building uses are shown in three categories and the general shape of the commercial area can be noted. Source— 1955 Survey.

The next two maps indicate areas where heavy expenses in firefighting are incurred by the City, or where low returns for real estate taxation are evident. Both these maps were used to distinguish further areas which might be investigated through an internal survey of the houses.

Fire calls for the years 1953-57 formed the basis for this section. They were classified into two types, primary and secondary hazards, in an attempt to relate the fire calls to the structure of a house rather than to the occupants or external forces.

Calls made due to any form of heater, fireplace or chimney, or because of a fault in the wiring of the house, were regarded as primary; calls related to cooking, cigarette smoking, backyard rubbish, lightning or short circuits in appliances were regarded as being secondary fires.

The results of this examination of the fire calls were then related to the population of the housing block concerned; i.e. a certain number of persons per fire call; the lower numbers per fire call indicating a higher fire hazard area.

Although most fire calls associated with heating appliances are caused by human negligence, it is generally in those areas where housing is already poor in standard that outbreaks of fire occur. The construction of many houses is a permanent fire hazard compared with better properties. The situation is made much more dangerous by the use in these same structures of inefficient and unsafe heaters. Appliances often are raised in temperatures to make up for the loss of heat through a badly insulated structure, increasing the hazard. All these factors point to false economy, and underline the need for stricter bylaws and enforcement.

Based on 1957 as a typical year, the following is an analysis of all residential fire calls excluding false alarms.

Causes	*Percentage*
Heating (Chimneys, stoves, oil heaters, ashes)	52%
Food Preparation (Cooker, grease)	11%
Electrical	18%
Miscellaneous (General Carelessness Etc.)	19%

Two areas are outstanding for the high number of fires in relation to population. They include blocks of the worst category, and many surrounding blocks are almost as bad. The first area is between Rideau and Montreal Streets, and the second is in the Wartime Housing Area north of Concession Street and between Macdonnell Street and Grey Street.

Other poor areas are scattered generally to the north of Princess Street, although the easterly end of the Central Area below Bagot Street is concentrated.

During the 5 year period for which figures have been analyzed, 6 civilians have died through fires, and 7 civilians and 23 firemen have been treated medically for injuries received. Just recently in late 1959, a residential fire caused the deaths of 3 children within the Study Area. A heating appliance caused a rapid conflagration. This disastrous fire occurred at 222 Montreal Street. The external survey classified the property as being poor; an earlier survey showed that it was overcrowded.

The Fire Department, as well as being called to fires, makes fire prevention inspections of houses on request or on complaint. Heating appliances, electrical and gas services and supply, and alternative escape routes are examined.

The Department has power to authorize compliance with its code and, in certain situations, can authorize the removal of dilapidated buildings that are a fire hazard.

The Fire Department might act jointly with the Health and Building Departments when a city housing code has been established.

TABLE VI

FIRE CALL FREQUENCY

Block No.	*Residence Fires*	*People*	*Persons Fire*
65	1	—	—
66	3	136	45.3
67	5	208	41.6
68	2	94	47.0
69	none	71	—
70	4	96	24.0
71	5	156	31.2
72	1	56	56.0
73	3	138	46.0
74 & 78	5	177	35.4
75	16	152	9.5
76	3	98	32.6
77	3	128	42.6
79	2	107	53.5
80	5	162	32.4
81	1	Institution	—
82	2	135	67.5
83	8	158	19.7
84	1	125	125.0
85	4	214	53.5
86	2	140	70.0
87	2	130	65.0
88	6	218	36.3
89	1	Institution	—
90	2	91	45.5
91	3	115	38.3
92	5	163	32.6
93	5	Commercial	—
94	2	8	4.0
95	4	195	48.7
96	none	140	—
97	2	Industrial	—

Sources: Kingston Fire Department figures — 1953-1957. Population and Building Density Report — 1957 — Ian MacGregor. *Note*: This is only a section of a table covering blocks 1-161 inclusive. The complete table may be seen in the City Planning Office.

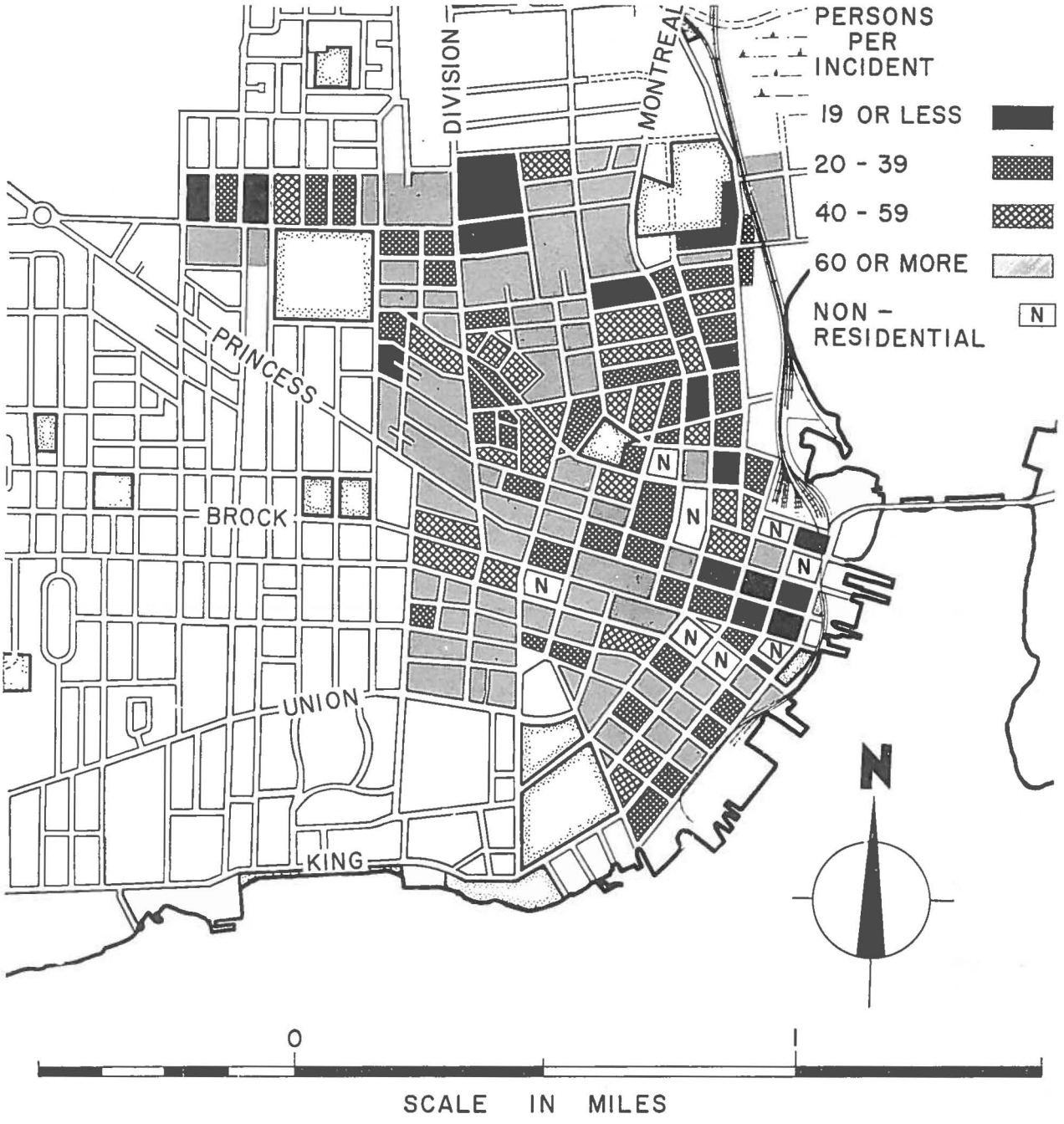


ILLUSTRATION NO. 42—MAP 9—FIRE CALLS IN DWELLINGS. Map No. 9 illustrates the relationship between the number of fires in a five-year period and the population of the block. It shows in particular that certain downtown blocks and areas north of Princess Street experience the highest fire incidence. The area north of Concession Street also has a high number of fires in relation to population. Generally, it is in those areas where housing is already poor in standard that outbreaks of fire occur. Source—City Fire Department—Records 1953 to 1957.

To obtain this material, the records of the Assessment Department for 1956 to 1957 were used. The assessed values of the properties were originally prepared in 1939, the only annual changes being those made because of deterioration, alteration or improvements.

To adjust the figures to present value, the land value, which has remained more constant over the period, was retained; and the present assessed value of the buildings was multiplied three times. This gave figures close to today's market value. The total property value of a block was plotted in relation to its ground area in square feet, giving a result in dollars per square foot.

This attempts to indicate areas where taxation return is low, with houses of a lower value than is general in the City. A distortion occurs only when a public building of some type is contained within a block of poor housing, and the average value is thereby increased, perhaps out of all proportion.

Since the study was undertaken, land assessment in the City has been revised, mainly as it affects newer residential areas, but in any case this does not alter the relative values indicated here. The highest value is centred on the commercial area at Bagot Street and Princess Street, spreading up Princess Street and into the institutional and better residential areas which exist mainly south of Princess Street.

Values are considerably lower to the north of Barrack Street and Colborne Street, and become very low in the vicinity of Concession Street. As a policy objective, improvement and redevelopment should aim to retain high values where they already occur and to bring about substantial increases where values are low. The study seeks to discover reasons why properties in certain areas are low in value or why owners do not improve their structures. The anomaly of present assessment policy has to be taken into account in the run down areas. Assessment is immediately raised following any home improvement. The system furthers deterioration and works against good maintenance. To conserve the value of buildings was originally one of the intentions of the zoning by-law, but when it assumes changes to more valuable uses when none are likely, it should be revised. It is recommended that much of the area north of Princess Street should be zoned residential —which is what it is. On the fringe, non-residential uses such as scrap metal yards, laundries and other small industries have intruded. Although the intrusions may not have caused a fall in values in the immediate vicinity they have influenced in a detrimental manner the value of adjacent residential blocks, have greatly reduced livability, and have made private redevelopment of residential property almost impossible of achievement unless aided by government.

There are also other residential areas where zoning allows the intrusion of other uses. The Sydenham Ward is worthy of particular mention. The situation should be remedied as soon as possible in order that it should retain its very good quality and, as important, its continuing potential as a fine place in which to live.

TABLE VII

PROPERTY VALUES

Block No.	*Block Area In 1000's of Sq. Ft.*	APPROX. VALUE IN 1000's OF $'S			*Block Value In $/sq. ft.*
		Land	*Bldgs.*	*Total*	
64	23	1	53	54	2.3
65	51	2	57	59	1.1
66	76	6	162	168	2.2
67	224	14	251	265	1.2
68	77	5	77	82	1.1
69	63	7	165	172	2.7
70	92	11	173	185	2.0
71	151	10	199	209	1.4
72	75	4	51	55	.7
73	156	8	46	54	.3
74	102	7	145	152	1.5
75	128	9	176	185	1.4
76	132	8	131	139	1.0
77	287	8	165	173	.6
78	37	2	50	52	1.4
79	74	5	117	122	1.7
80	90	7	156	163	1.8
81	125	6	591	597	4.8
82	106	7	153	160	1.6
83	107	7	170	177	1.6
84	120	16	228	244	2.0
85	129	15	273	288	2.2
86	97	14	225	239	2.4
87	96	14	319	333	3.5
88	238	28	832	860	3.6
90	117	12	294	306	2.6
91	111	7	151	158	1.4
92	69	6	149	155	2.2
93	86	9	254	263	3.1
94	83	1	10	11	.1
95	135	21	311	332	2.5
96	108	16	190	206	1.9
97	103	29	727	756	7.3
98	160	61	788	849	5.3
99	124	62	463	525	4.2
100	125	78	591	669	5.3
101	121	123	1222	1345	11.1
102	91	120	788	908	9.9
103	123	131	1380	1511	12.3
104	103	58	459	517	5.0
105	101	40	486	526	5.2
106	109	73	1119	1192	10.9
107	177	36	425	461	2.6

Source: City of Kingston Assessment Department figures—1956-57. Note: this is only a section of a table covering blocks 1-161 incl. The complete table may be seen in the City Planning Office.

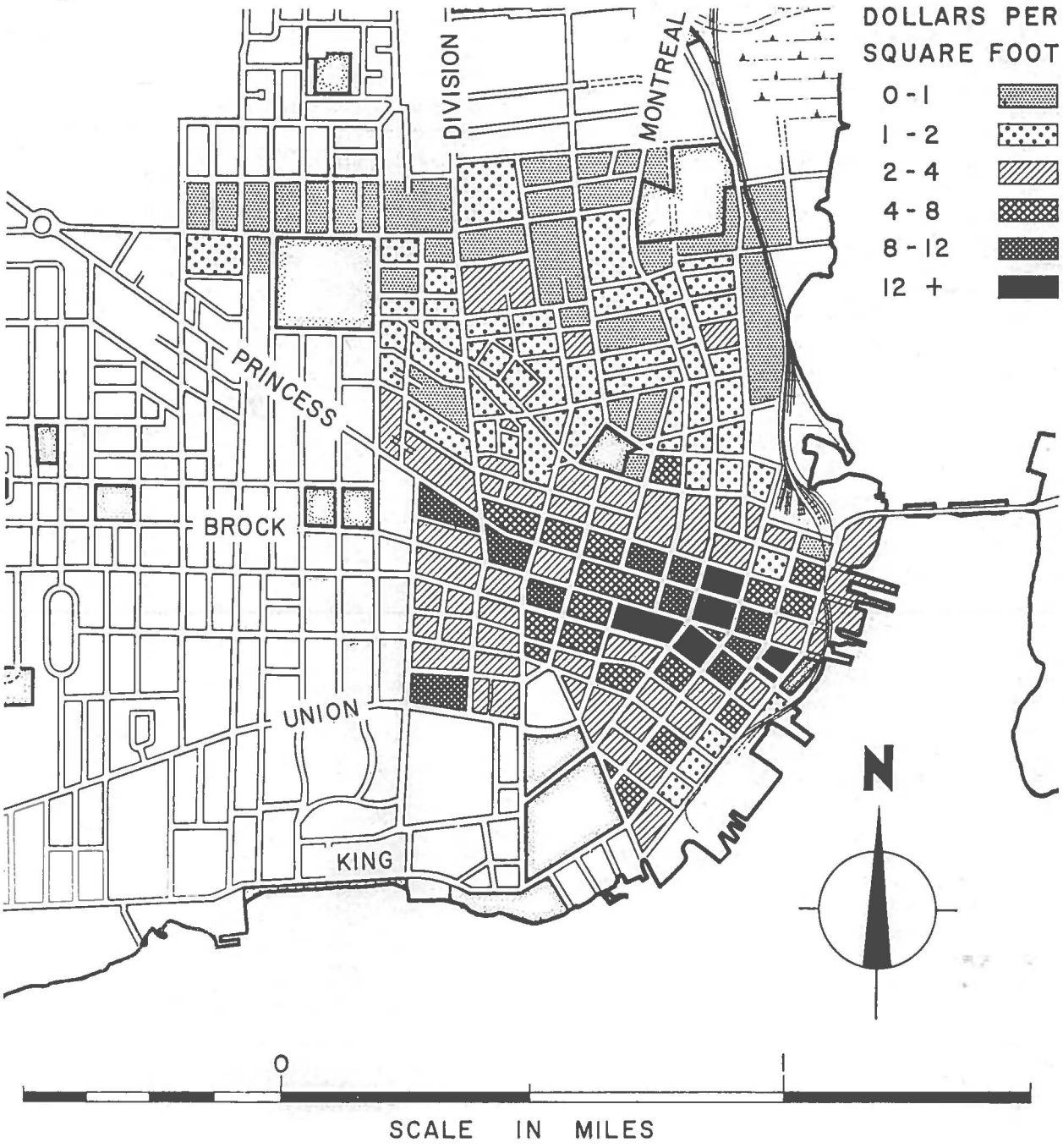


ILLUSTRATION NO. 43—MAP 10—ASSESSED VALUES OF PROPERTIES. The highest values in the Study Area surround the Central Area, with a decrease in value noticeable in the northerly section. Some of the highest value blocks are also the most deteriorated indicating that the value of a downtown location is still sufficient to offset the depreciating influence of physical obsolescence. It is doubtful if this advantage can be maintained without substantial redevelopment of the Central Area. Assessment figures of 1956-57 form the basis for these approximate values.

In any City there will be overcrowded buildings to be found in almost any area. Generally speaking, however, the largest percentage of such buildings will be found in the older or the poorer sections of a town. It is in such districts that families are forced to crowd together into living accommodation that is not adequate for their physical or social needs. High rents or lack of space in other parts of the City force the lowest economic groups to overcrowd the least desirable districts, thus increasing the pressure on housing accommodation that may already be substandard.

Overcrowding is a function of persons per room, with a room in this instance being any dwelled-in area with the exception of bathrooms, hallways, attics and cellars (although there could be finished rooms in a basement). Room sizes were not considered. Although the importance of space was recognized, it was not possible to take it into account.

The results of the survey showed a fairly large number of dwelling units (either houses or apartments) overcrowded. This was especially true in the case of rented dwelling units. There were few blocks, however, which could be classed as being overcrowded as a whole. In almost every block there were enough dwelling units lived in by limited numbers of people (generally owner-occupied units) to offset those units lived in by large numbers of people. Even in the eight blocks found to be overcrowded, there were many units that could not be called over-crowded. Within the survey area, out of a total of 2849 dwelling units, 462 were overcrowded.

The figures for the following table were obtained through an internal Survey of the units in the Survey Area. Where it was impossible to gain entrance to a particular unit for some reason, assessment department figures were used to complete the totals. For block, as well as for individual unit statistics, the figure indicating the extent of overcrowding was acquired as follows:

$$\frac{\text{Number of persons}}{\text{Number of rooms}}$$

TABLE VIII

OVERCROWDING

Block No.	No. of Persons	No. of Rooms	Persons per Room	Block No.	No. of Persons	No. of Rooms	Persons per Room
15	143	149	.96	89	Institutional &		
16	199	212	.94		Commercial		
26	235	319	.74	90	101	125	.81
34	102	163	.63	91	115	97	1.18
35	120	186	.65	92	159	182	.87
37	73	96	.76	93	Commercial		
38	45	65	.69	94	14	18	.78
39	93	135	.69	95	232	260	.89
40	113	173	.65	96	10	12	.83
42	135	186	.73	97	Institutional		
43	134	226	.59	98	141	183	.77
44	161	185	.87	99	73	87	.84
45	178	236	.76	100	105	142	.74
51	110	148	.74	101	79	117	.67
52	118	147	.80	102	83	99	.84
53	153	173	.89	103	112	131	.85
54	70	135	.52	104	119	142	.84
55	137	154	.90	105	39	33	1.15
56	148	186	.80	108	129	170	.76
57	107	127	.84	109	176	246	.72
58	125	175	.72	110	249	360	.69
59	78	86	.91	111	31	44	.70
63	126	164	.77	112	25	41	.61
64	42	51	.82	113	98	130	.75
65	59	95	.62	114	59	55	1.07
66	175	220	.80	115	7	5	1.40
67	216	337	.64	116	Commercial		
68	98	125	.78	118	136	227	.60
69	73	120	.61	124	138	214	.65
70	100	156	.64	130	185	340	.54
71	189	277	.68	135	151	273	.55
73	151	232	.65	137	384	493	.78
74	143	186	.77	140	Commercial		
75	170	204	.83	141	39	61	.64
76	127	165	.77	142	19	30	.63
77	149	210	.71	143	Mainly Institutional		
78	56	67	.83	144	Institutional		
79	107	140	.76	145	116	112	1.04
80	162	197	.82	146	18	17	1.06
81	Institutional			147	60	104	.58
82	140	199	.70	148	104	197	.53
83	210	206	1.02	149	110	105	1.05
84	129	214	.60	150	154	219	.70
85	228	303	.75	151	139	207	.67
86	172	230	.75	152	58	71	.82
87	125	183	.69	155	66	105	.63
88	221	278	.80	158	24	56	.43
				161	122	193	.63

Source: Field Surveys, 1958-59. The table shows the figures according to block but the individual dwellings were visited in the field survey.

NOTE: MAPS, PART VII

The next 3 maps are the result of an internal survey of residential properties carried out in 1958 and 1959 to investigate internal conditions and to relate the number of occupants to the accommodation available.

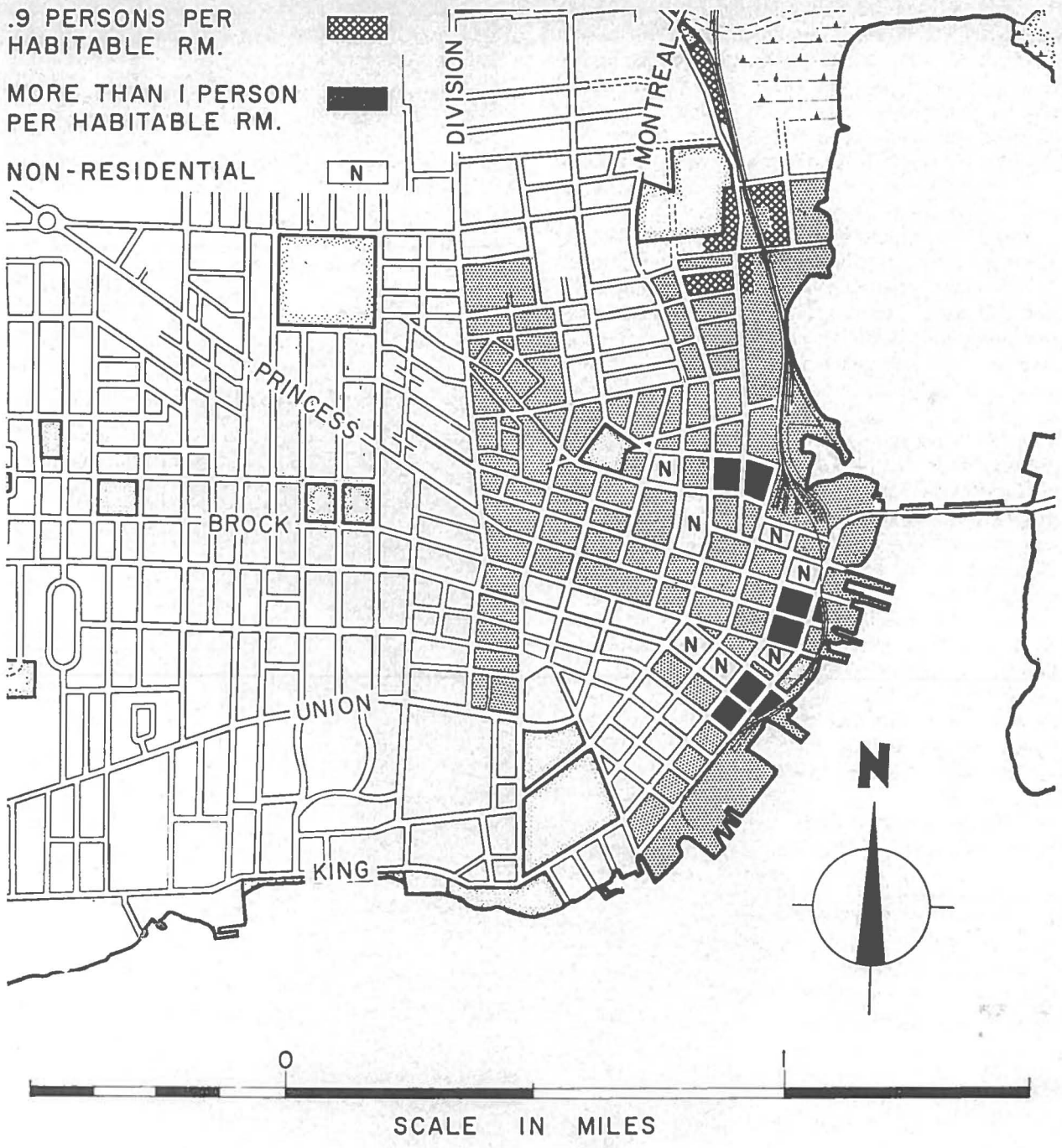


ILLUSTRATION NO. 44—MAP 11—OVERCROWDING IN DWELLINGS. Little overcrowding appears in the Study Area when expressed by means of the residential block. However, it does occur in poor accommodation downtown and in an area that was once a fringe development of the City. Actually, there are a larger number of individual instances of overcrowding but seldom are a majority of dwellings in a block overcrowded; hence the use of the block does not give a complete picture. Within the survey area 462 out of 2849 dwelling units were found to be overcrowded.

For persons who have always lived in homes with complete sanitary equipment it is difficult to realize how many others live in units where equipment is not adequate or where it must be shared with large groups, often with separate families. Where sanitary facilities do not come up to a required standard, especially where there is not hot water, it is a problem of health as well as inconvenience which is involved.

For the purposes of this survey the following minimum standards were required, namely that there should be hot water facilities (for the dwelling unit) and one water closet, one sink or lavatory basin, and one bath-tub or shower for every 10 persons. The survey discovered that there was a fairly large number of multi-family buildings where families lived in non-self-contained units and shared facilities. They were not penalized if there were less than 10 persons involved. In some cases one family might have to use the bathroom basin for water for cooking purposes and washing dishes. This was especially true in essentially one-family houses that have been converted so as to accommodate more than one family.

In each building or dwelling unit the number of persons was related to the number of sanitary fittings. A point was scored against each unit that failed to reach the minimum standard in respect to any one of the four categories. The number of points was then multiplied by the number of persons in the unit to obtain the total score against any unit.

In the block analysis, the fraction giving the block percentage of deficiency was as follows:

$$\frac{\text{number of points against} \times 100}{\text{number of persons} \times 4}$$

In cases where it was not possible to obtain entrance to units, the information was taken from assessment department records so that complete figures for the block were available.

Within the survey area the following total number of units was found to lack the necessary sanitary fittings:

Fitting	*Units Deficient*
Hot water facilities	227
1 W.C. per 10 persons	170
1 sink or basin per 10 persons	35
1 bath or shower per 10 persons	456

TABLE IX

SANITARY DEFICIENCIES

PERCENTAGES BY BLOCKS TO INDICATE DEGREE OF DEFICIENCY

Block No.	*% San. Def.*	*Block No.*	*% San. Def.*	*Block No.*	*% San. Def.*
15	22.2	74	8.7	105	19.8
16	23.1	75	5.4	108	1.9
26	4.7	76	2.7	109	4.9
34	6.1	77	4.4	110	16.3
35	1.7	78	Nil	111	10.5
37	17.8	79	0.7	112	1.0
38	5.5	80	14.7	113	9.2
39	Nil	81	Instit.	114	18.2
40	2.7	82	7.5	115	Nil
42	8.1	83	8.2	116	Comm.
43	16.0	84	2.1	118	5.9
44	7.3	85	7.8	124	5.2
45	3.0	86	5.0	130	2.7
51	6.3	87	8.2	135	6.5
52	9.3	88	16.0	137	6.5
53	20.4	89	Instit. &	140	Comm.
54	5.7		Comm.	141	4.5
55	20.6	90	8.9	142	Nil
56	16.9	91	15.6	143	Instit.
57	10.3	92	18.2	144	Instit.
58	8.6	93	Comm.	145	19.2
59	12.2	94	Nil	146	15.3
63	5.9	95	0.9	147	Nil
64	3.6	96	Nil	148	7.7
65	7.2	97	Instit.	149	25.2
66	6.6	98	5.1	150	7.7
67	11.5	99	0.7	151	2.4
68	8.2	100	7.1	152	3.4
69	5.5	101	8.9	155	2.3
70	6.0	102	2.4	158	4.2
71	5.4	103	10.3	161	10.0
73	7.9	104	8.8		

Source: Field Surveys, 1958-59.

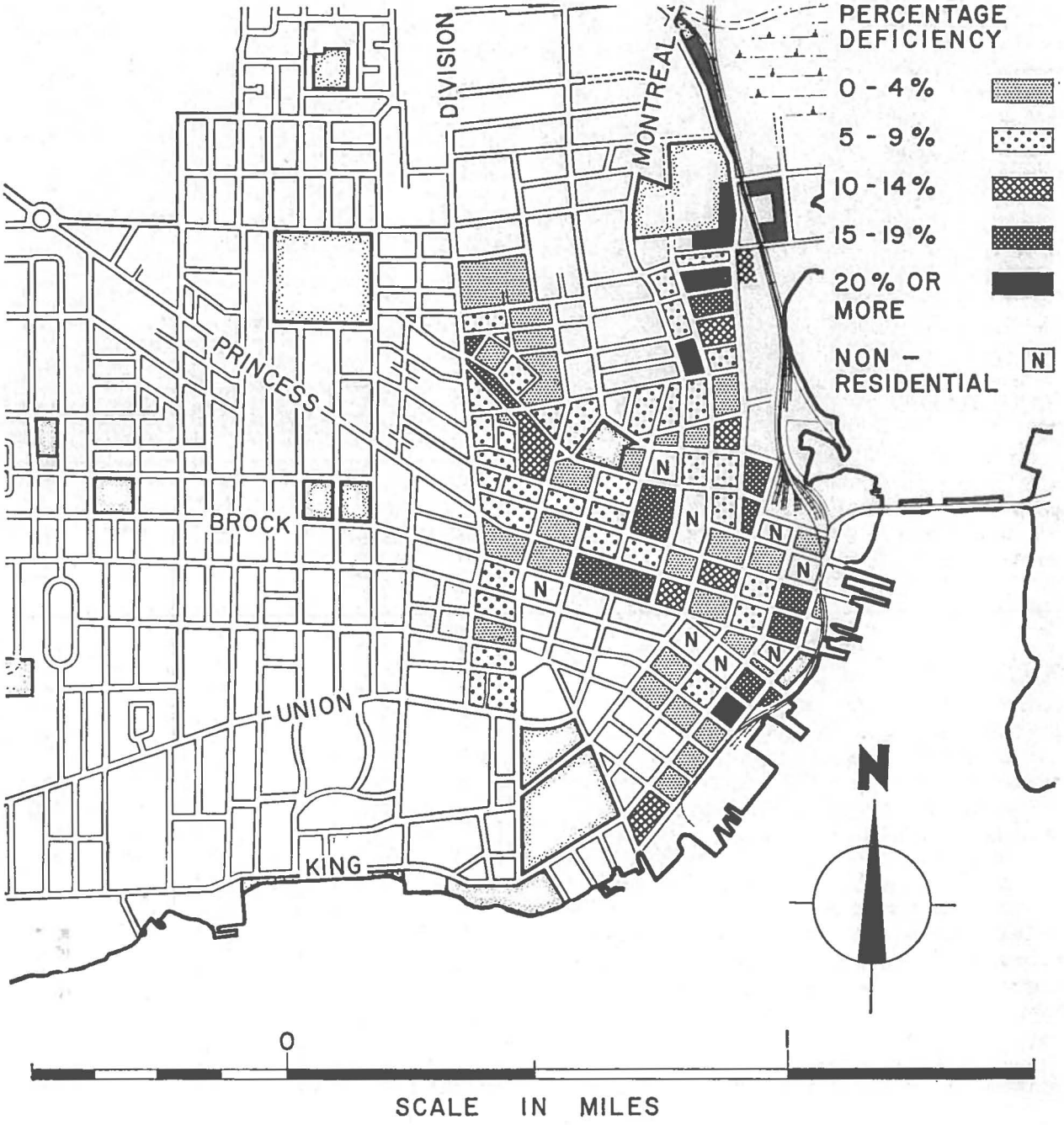


ILLUSTRATION NO. 45—MAP 12—SANITATION DEFICIENCIES IN DWELLINGS. The map is based on standards suggested as a minimum for a housing code. The table and map shows where any serious deficiencies in sanitary accommodation occur. Poorest conditions occur again near the downtown Shopping Area and near Rideau Street.

The condition of a building depends on both its internal and external construction and maintenance. For this reason the results of two surveys were combined in ascertaining the condition of the buildings in the Survey Area.

In the first external survey we were primarily interested in checking on construction materials, in the condition and maintenance of walls, roofs, chimney, eaves and windows etc., and in the presence and conditions of lean-to additions, porches, detached sheds and fences. Where faults occurred, deficiency points were placed against the building, with certain factors receiving more penalty points than others. The main constructional elements were judged to be of more importance than those involving maintenance. Buildings were given ratings of good, fair, poor and bad, depending on the number of points levied against the dwelling.

Good — 0 — 5 points
Fair — 6 — 15 points
Poor — 16 — 25 points
Bad — 26 or more points.

The internal survey was conducted over a slightly more limited area with a number of blocks eliminated on the basis of the external survey. During this survey we recorded the floor area and height of rooms, the sizes or area of windows in rooms, dampness, the amount and condition of sanitary equipment, the provision of hot and/or cold water and the method of heating used. There was also a certain amount of subjective judgement involved in rating the condition of floors, stairways and the buildings as a whole.

In ascertaining the physical condition of the building the results of both surveys were used. As with the first survey, a point system was applied. From the external survey results, the following points were assessed and internal penalties added to this figure:

Good 0
Fair 1
Poor 2
Bad 3

Internal faults were divided into two categories. Major faults which were awarded 1 penalty point included rooms under 7 ft. in height, rooms with no windows and rooms under 60 sq. ft. in area. Minor faults included window area under 10% of room area, and stove heating, and were awarded ½ penalty point. (Two fairs and one poor also received ½ penalty point.) These standards relate to those proposed for a minimum standards Housing By-Law in Kingston. The maximum number of points allotted against any one building was 5. The total number of penalty points was then multiplied by the number of people in the building to indicate building inadequacy.

Block inadequacy was calculated as follows:

$$\frac{\text{Number of points} \times 100}{\text{Number of people} \times 5}$$

TABLE X

BUILDING CONDITIONS

DEFICIENCIES IN STRUCTURE, SIZE AND MAINTENANCE

Block No.	*% Building Def.*	*Block No.*	*% Building Def.*	*Block No.*	*% Building Def.*
15	37.9	78	62.9	115	56.0
16	28.4	79	49.5	116	Comm.
26	51.4	80	64.4	118	34.4
34	43.0	81	Inst.	124	45.6
35	52.1	82	54.4	130	47.3
37	51.9	83	65.9	135	56.3
38	55.3	84	44.1	137	54.5
39	63.6	85	36.9	140	Comm.
40	30.4	86	19.9	141	44.6
42	27.7	87	39.0	142	Nil
43	47.1	88	70.2	143	Inst.
44	53.2	89	Inst. &	144	Inst.
45	28.6		Comm.	145	75.2
51	32.0	90	60.0	146	60.0
52	46.3	91	61.8	147	31.6
53	52.3	92	48.9	148	33.7
54	14.9	93	Comm.	149	76.7
55	46.0	94	60.0	150	60.9
56	24.2	95	47.3	151	49.4
57	35.4	96	64.0	152	39.0
58	56.6	97	Inst.	155	39.1
59	34.9	98	33.7	158	Nil
63	60.3	99	56.4	161	60.0
64	19.7	100	58.1		
65	53.7	101	30.5		
66	33.8	102	52.7		
67	50.0	103	53.4		
68	47.9	104	46.1		
69	40.3	105	80.5		
70	63.2	108	30.3		
71	42.9	109	52.4		
73	41.9	110	55.9		
74	39.7	111	60.0		
75	55.9	112	19.2		
76	66.6	113	48.5		
77	52.7	114	9.2		

For this table figures are not complete for most blocks due to inability to gain entrance to some buildings. The figures are taken from the number of rooms and people surveyed only.

Source: Field Surveys, 1958-59.

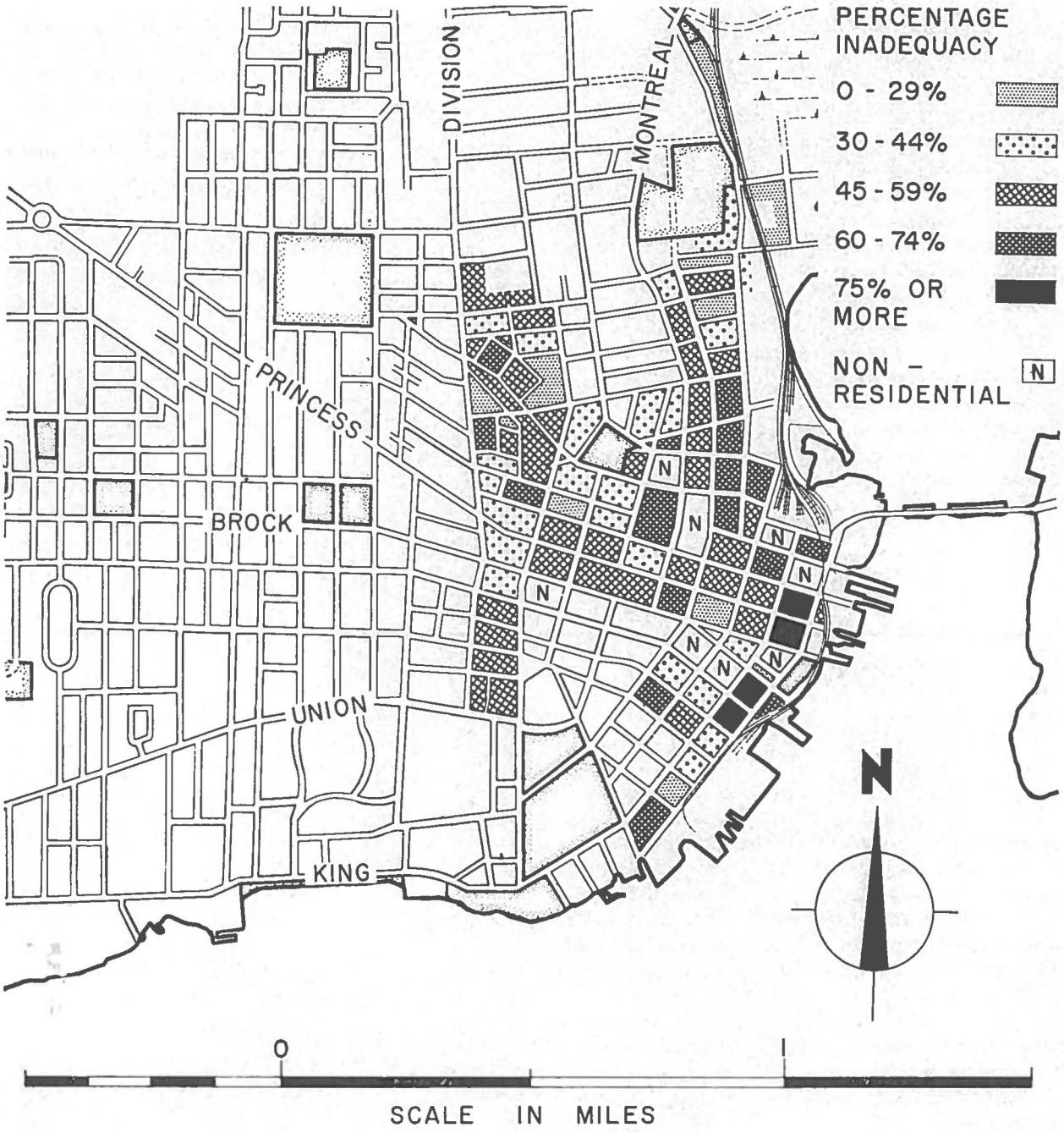


ILLUSTRATION NO. 46—MAP 13—CONDITION OF DWELLINGS. The facing table and map show the inadequacy of buildings according to internal conditions. A concentration of poor conditions appears on Rideau Street while the worst conditions prevail very close to the City Hall Area.

This map serves as a summary of the results of both the internal survey and the external survey of residential properties. Houses on the map are regarded as substandard in relation to one or other of the surveys (substandard being defined in relation to the proposed housing code—see Appendix).

In defining substandard both building conditions and sanitary conditions were considered. A building which is deficient in one way may not be deficient in the other so that a more accurate, overall picture may be obtained by combining both criteria.

For this map the number of inhabitants was not considered, although it was recognized that deficiencies are intensified in relation to the number of people subjected to them. The results of the sanitary and building condition maps were combined. For each dwelling unit, the number of deficiency points caused by sanitary inadequacy were added to those caused by the general condition. The buildings were then rated as follows:

Good	0 — 1
Fair	2 — 4
Poor	5 — 6
Bad	7 — 9

Out of 2849 dwelling units surveyed, 979 were good, 1532 were fair, 277 were poor and 45 were bad. For this map only those which fall into the poor and bad categories are regarded as the substandard houses of the area. (If a building's score added to a number plus ½, the last whole number was used (e.g. 1½ was considered as 1).

The Survey results show that substandard housing was scattered throughout the Survey Area. To make a block analysis does not accurately pinpoint the poor buildings in the City. There are single houses or small rows of houses which are poor, but there are very few blocks which are generally bad, and none which are all bad. In some cases the few fair houses lose their value because of the surrounding construction. To present a picture of the complete study area, the results of the external survey were also used, so that houses judged as poor or bad, by the method already described, were also included on the map.

In the course of the two surveys it also became clear that while exterior conditions often indicated the interior and overall conditions of a building, this was not always the case. In some instances a building with a poor exterior was fair or good inside, or vice-versa. It was thought advisable to indicate those buildings which were poor externally but which did not fall into the class of substandard housing. These are houses which probably should be given some fairly immediate attention if they are not to deteriorate and fall into a poorer class in the future.

TABLE XI

SUBSTANDARD HOUSING

Internal And External Survey	*External Survey Only*		*Internal And External Survey*	*External Survey Only*
34	2	3	96	—	—
35	2	2	97	n.r.	n.r.
36	n.s.	—	98	1	5
37	6	6	99	2	4
38	—	6	100	5	—
39	—	—	101	1	—
40	1	—	102	1	—
41	n.s.	7	103	4	—
42	—	3	104	8	3
43	5	10	105	5	2
44	2	—	106	n.s.	—
45	—	2	107	n.s.	3
46	n.s.	4	108	—	—
47	n.s.	3	109	4	2
48	n.s.	9	110	6	1
49	n.s.	10	111	2	n.s.
50	n.s.	7	112	—	n.s.
51	—	2	113	5	1
52	3	5	114	3	1
53	11	12	115	—	—
54	—	—	116	n.s.	n.s.
55	5	9	117	n.s.	7
56	1	1	118	—	3
57	—	6	119	n.s.	n.s.
58	4	12	120	n.s.	—
59	1	2	121	n.s.	n.s.
60	n.s.	1	122	n.s.	—
61	n.s.	9	123	n.s.	—
62	n.s.	10	124	1	4
63	10	14	125	n.s.	—
64	—	—	126	n.s.	—
65	2	4	127	n.s.	1
66	2	2	128	n.s.	—
67	5	7	129	n.s.	2
68	5	7	130	5	9
69	5	3	131	n.s.	—
70	6	6	132	n.s.	—
71	7	15	133	n.s.	—
72	n.s.	1	134	n.s.	17
73	3	1	135	40	7
74	2	5	136	n.s.	—
75	4	4	137	14	15
76	9	5	138	n.s.	—
77	8	4	139	n.s.	—
78	3	1	140	—	—
79	1	10	141	1	1
80	8	6	142	—	—
81	n.r.	n.r.	143	n.s.	n.s.
82	9	8	144	n.s.	n.s.
83	9	8	145	11	2
84	4	3	146	1	—
85	5	4	147	1	1
86	1	2	148	1	2
87	9	5	149	14	7
88	19	4	150	8	10
89	n.r.	n.r.	151	2	2
90	4	2	152	1	1
91	8	3			
92	4	7	Internal Study Area	322	492
93	n.r.	n.r.			
94	—	—			
95	2	1			

Source: Field Surveys, 1958-59. This is only a section of a table covering blocks 1-161 incl. The complete table may be seen in the City Planning Office. Note: n.s.—not surveyed; n.r.—non-residential.

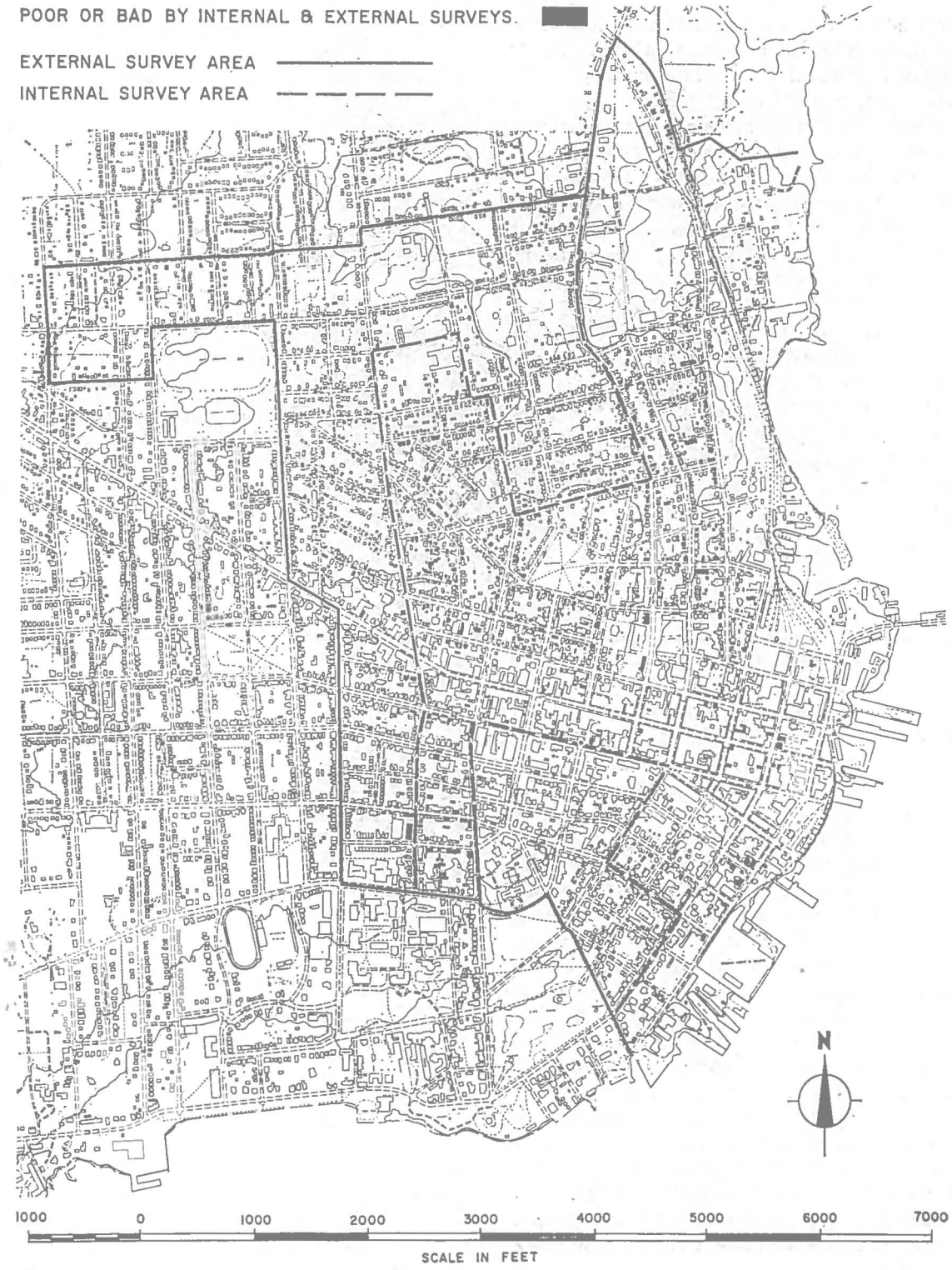

POOR OR BAD BY INTERNAL & EXTERNAL SURVEYS.
EXTERNAL SURVEY AREA
INTERNAL SURVEY AREA
N
1000 0 1000 2000 3000 4000 5000 6000 7000
SCALE IN FEET

ILLUSTRATION NO. 47—MAP 14—DISTRIBUTION OF SUBSTANDARD HOUSING. This map illustrates the location of poor housing as indicated by the results of the external survey and combined, where possible, with the results of the internal survey.

Proposals for the City should be seen in relation to the recommendations contained in Map No. 2, expressed as regional growth. It will be seen that the main industrial section is important regionally as well as locally. Residential areas are, however, more self-contained. The proposed new roads are placed so that industrial traffic should steer clear of the residential areas. In improving the road system it would seem certain that the traffic circle at the head of Princess Street will have to be substantially modified. Adequate major roads are located to serve the industrial areas. The low-lying land, adjoining Little Cataraqui Creek is included as Greenbelt. It is not suitable for industrial and commercial uses. When it is needed there is better and more serviceable land available outside the City boundaries.

It is anticipated that medium and high class residences will occupy the western sections of the City in the vicinity of Polson Park, while at a somewhat higher density development will occur north of Rideau Heights, and south of Highway 401. When all the land of the City is occupied, redevelopment within the older areas will increase in extent.

The Little Cataraqui Creek land should eventually be reclaimed as a water park, with parkland and the parkway as part of it. Neighbourhood parks and smaller play areas will also be required.

Commercial development will be in the form of additions and improvements downtown, and growth around existing nodal points. Ribbon development should be prevented on highways if they are properly to perform their special task of allowing unhindered traffic flow.

The restoration of the waterfront in the vicinity of the City Hall must be considered an integral part of any scheme of redevelopment for the Central Area. The waterfront was once Kingston's major industrial area but, with the shift to new methods of transportation, industry is withdrawing from the waterfront and regrouping near Highway 401. This process has left a badly deteriorated area at the bottom end of Princess Street. If the Central Business District is to be improved, it is essential that the waterfront also be improved. In fact, the rehabilitation of both areas must be carried out as parts of a comprehensive redevelopment plan for the whole Central Area. Only when all the Central Area's various and manifold parts are related into an overall scheme will redevelopment be effective and bring desired results.

TABLE XII

REDEVELOPMENT PROPOSALS

Area Shown on Map	*Existing Use*	*Proposed Use and Action*	*Total Area Acres*	*Redev. Area Acres*
1 West of Division north of Princess	Predominantly Residential	Rehabilitation of residential area, and small redevelopment scheme. Commercial area on Princess St. given better access and possibly rear service street	38.4	.61
2 East of Division north of Colborne	"	Integrated neighborhood helped by small areas of redevelopment	53.61	3 2
3 West of Montreal north of Bay	"	Small area of housing redeveloped, one commercial section expanded, with some neighbourhood commercial in a comprehensive scheme	31.56	68
4 East of Montreal north of Ordnance	"	Intrusion of industrial uses has taken place through wrong zoning. Residential zoning should be re-established and areas of bad housing removed or rehabilitated	40.4	7.75
5 East of Rideau, north of Place D'Armes	Predominantly industrial	Remove non-industrial uses or zone out of area. Whole area is linked functionally and physically to the improved line of Rideau Street and to King and Highway 2 at the new rotary	65.69	.41
6 north of Brock, south of Queen, east of Division	Commercial & Fringe uses—apartments, industrial and blighted areas	Downtown area of report—non-central area uses removed, generally by means of private redevelopment. Waterfront, and foot of Princess Street, redevelopment areas proposed	115.6	15.54
7 East & West of Barrie, south of Johnson	Predominantly Residential	Improvement area—some few houses removed and others improved in condition.	15.14	Nil
8 South of Johnson north of West	Predominantly Residential	Maintain residential area by general conservation changes in street pattern and traffic movement. Small redevelopment area of one block	37.86	1.82
9 West of Barrie, north of King	Generally University, hospitals, high-class residences	Allow for 20 year plan of University and thus allow expansion within framework of the City Plan	120.83	2.22

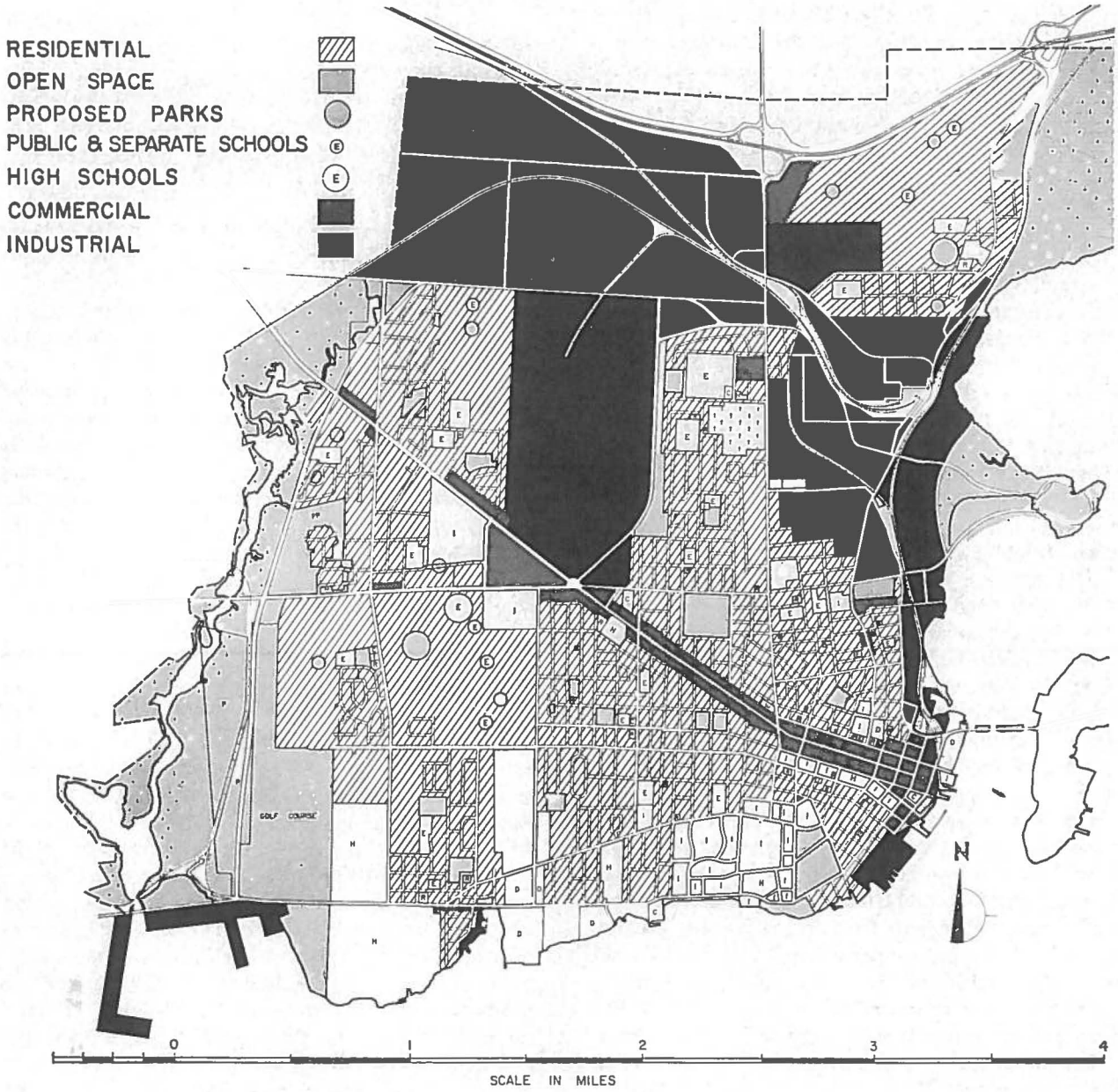


ILLUSTRATION NO. 48—MAP 15—PROPOSALS FOR LAND USE AND MAJOR STREETS FOR THE CITY AS A WHOLE. Comparison should be made with Map 3 on page 39 showing the amount of land still available for development within the present City boundaries. Certain areas should be made available for low-rental housing to accommodate relocated families from redevelopment areas. Comparison should also be made with Maps 1 and 2 on pages 18 and 19 showing existing and proposed development in the Greater Kingston Area to understand how development of the City forms part of regional growth.

In this map, the city-wide proposals are shown as they affect downtown and the surrounding residential district. Nine sub-areas, within the Study Area, were examined in some detail.

Area 1—This is a rehabilitation area with a redevelopment section contained within it. It contains a number of single-family houses within an obsolete road layout, with Princess Street changing its function from residential to commercial. Through traffic should be discouraged as the streets are very narrow and dangerous for traffic and children. Children play on the streets because few playgrounds are available in the neighbourhood.

Area 2—A rehabilitation area in which a number of things can be improved but where the whole district does not demand clearance. There are, however, several redevelopment sections. A reasonably large redevelopment section should be cleared to allow the design of a good housing project.

Area 3—Although it can hardly be classed as a rehabilitation area where nearly all the houses are very good in standard, Area 3 requires conservation measures designed to maintain the existing housing stock in good condition.

Area 4—Redevelopment sections are included in this rehabilitation area.

Area 5—A relocated link to Rideau Street is proposed within this industrial area.

Area 6—In the Central Area action by the City will include provision of parking lots, improved streets, and the application of a housing code. There will be relatively small islands to be rehabilitated or redeveloped, notably the Waterfront section and the area adjacent to the existing Market Square.

Area 7—There are a certain number of good houses in this residential area but off-street parking provision is very essential.

Area 8—Sydenham Ward is proposed as a conservation area within which there is a small section for redevelopment.

Area 9—In large part the main institutional group, Area 9 has small islands of redevelopment.

In Kingston there is bad housing scattered in small pockets over a wide area. Although the worst conditions are nearly all to be found in the Study Area, nowhere are there several blocks in which all the houses are in poor condition. There are advantages and disadvantages in this state of affairs. Wholesale clearance and redevelopment can be very disruptive to an old, well established neighbourhood; and the clearance of small dispersed pockets will avoid this difficulty. On the other hand, it is much more difficult to devise a clearance and redevelopment program on a piecemeal basis.

It is a condition of federal and provincial financial assistance that there must be alternative housing accommodation for families displaced by a redevelopment project. It may, therefore, be necessary to establish a supply of public housing. The most appropriate location for this would appear to be in Rideau Heights. In most cases, it is anticipated that the cleared sites will be used for housing, but some will be needed for civic purposes such as road improvements, and some might be more appropriately used for commercial or industrial redevelopment.

Money spent on public housing and redevelopment is largely wasted if the causes of bad housing conditions are not removed. One prerequisite to the elimination of slums is a steady supply of housing at prices or rents which people can afford. The other is to maintain the existing housing stock in good condition. This latter end can be attained through enforcement of a housing code, and the promotion of a neighbourhood improvement programme.

Redevelopment of substandard housing areas by means of clearance and rebuilding can be a costly and disruptive procedure. Many deteriorating houses should never have been permitted in the first place—they were not properly built or they were built in the wrong place. There are other deteriorated areas which might have had many more years of useful life if the buildings had been properly maintained and overcrowding prohibited. It is a waste of money and physical resources for a community to permit the needless deterioration of its greatest asset—its stock of livable housing.

To prevent needless deterioration of housing areas which are basically sound, positive programmes of neighbourhood conservation should be established. Such programmes will require resolute action on the part of the City and also the residents. There is no good reason why many of Kingston's attractive old neighbourhoods cannot grow old gracefully.

Municipal action may take the form of the application of a minimum standards housing code, together with adequate enforcement of building and zoning regulations. In addition, assistance should be given to the formation of voluntary neighbourhood groups who will undertake measures designed to encourage high standards of maintenance on the part of property owners, householders and tenants. Assistance could be made available to such groups by the Planning Office through the dissemination of information and the preparation of plans directed to the improvement of neighbourhood design. Fundamental to the success of a programme of Neighbourhood Conservation will be a close collaboration between the citizen group and the City.

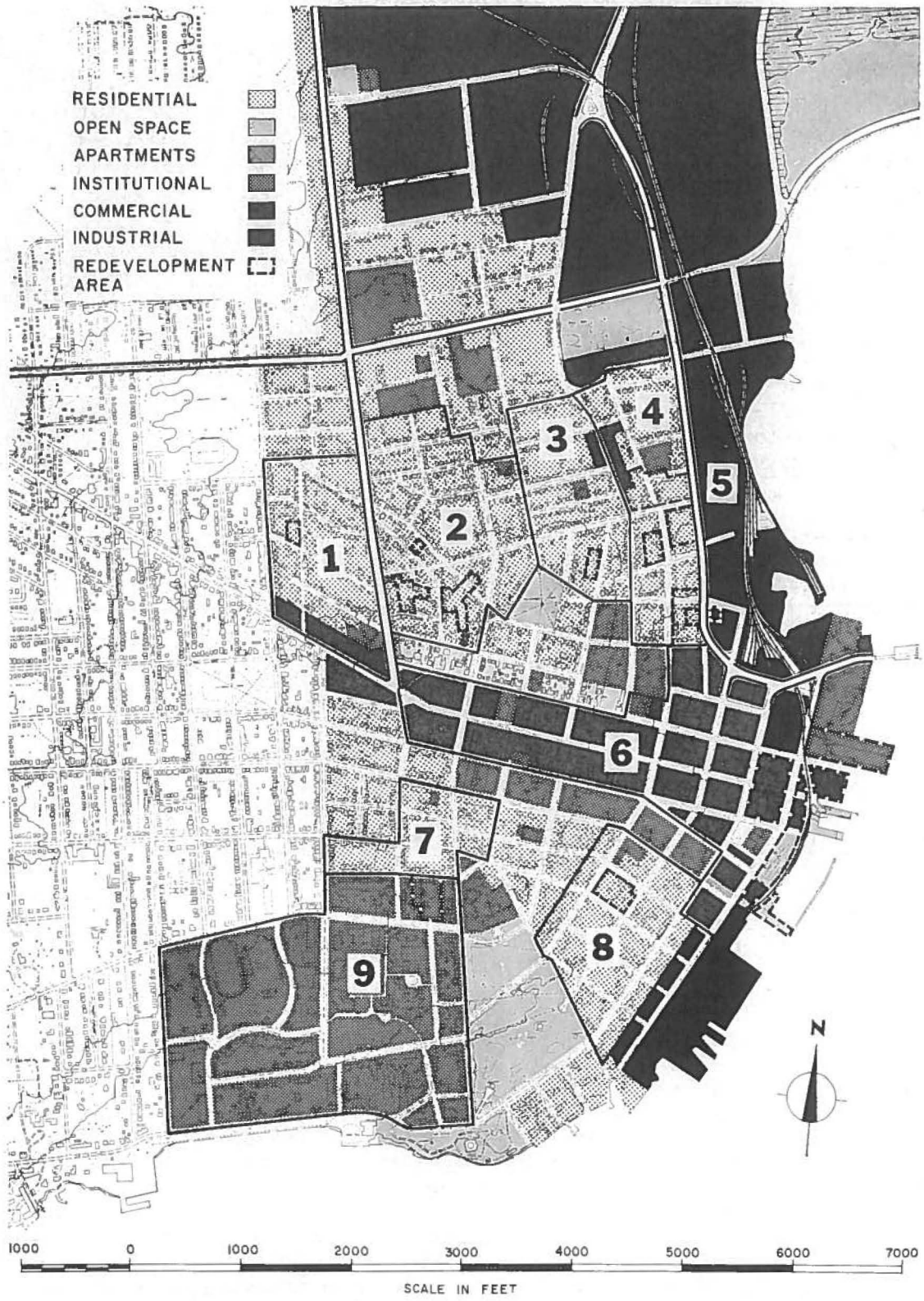


ILLUSTRATION NO. 49 — MAP 16 — PROPOSALS FOR LAND USE AND MAJOR STREETS FOR THE STUDY AREA. As a result it is suggested that certain redevelopment schemes be initiated by the City Council, together with the adoption of a Housing Code.

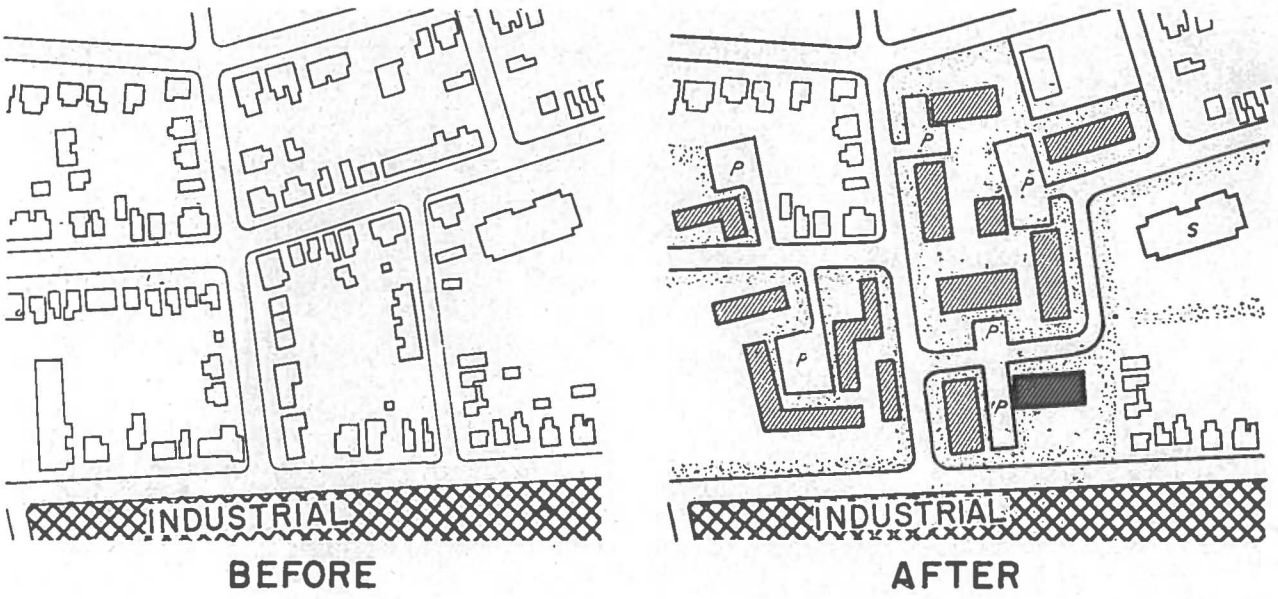


ILLUSTRATION NO. 50—DIAGRAM 6. An example of a redevelopment scheme within an area which should be rehabilitated. It suggests the possible inclusion of new housing, an improvement in street layout and recreational facilities, and the provision of off-street parking. Density control in these areas will be very important.

Introduction to

PART IX
SPECIAL STUDIES

In the following pages attention is directed to certain specific areas which because of their unusual qualities or importance deserve special consideration.
Section 1 examines the Rideau Heights area where there exists a housing problem peculiar to new areas on the fringes of Canadian cities.
Section 2 is concerned with the conservation of the Old Sydenham Ward area which contains numerous buildings of great architectural and historic merit.
Section 3 contains a variety of proposals for the improvement of the Central Business District.
Section 4 includes recommendations for the restoration of the waterfront which has become badly deteriorated in the Central Area.

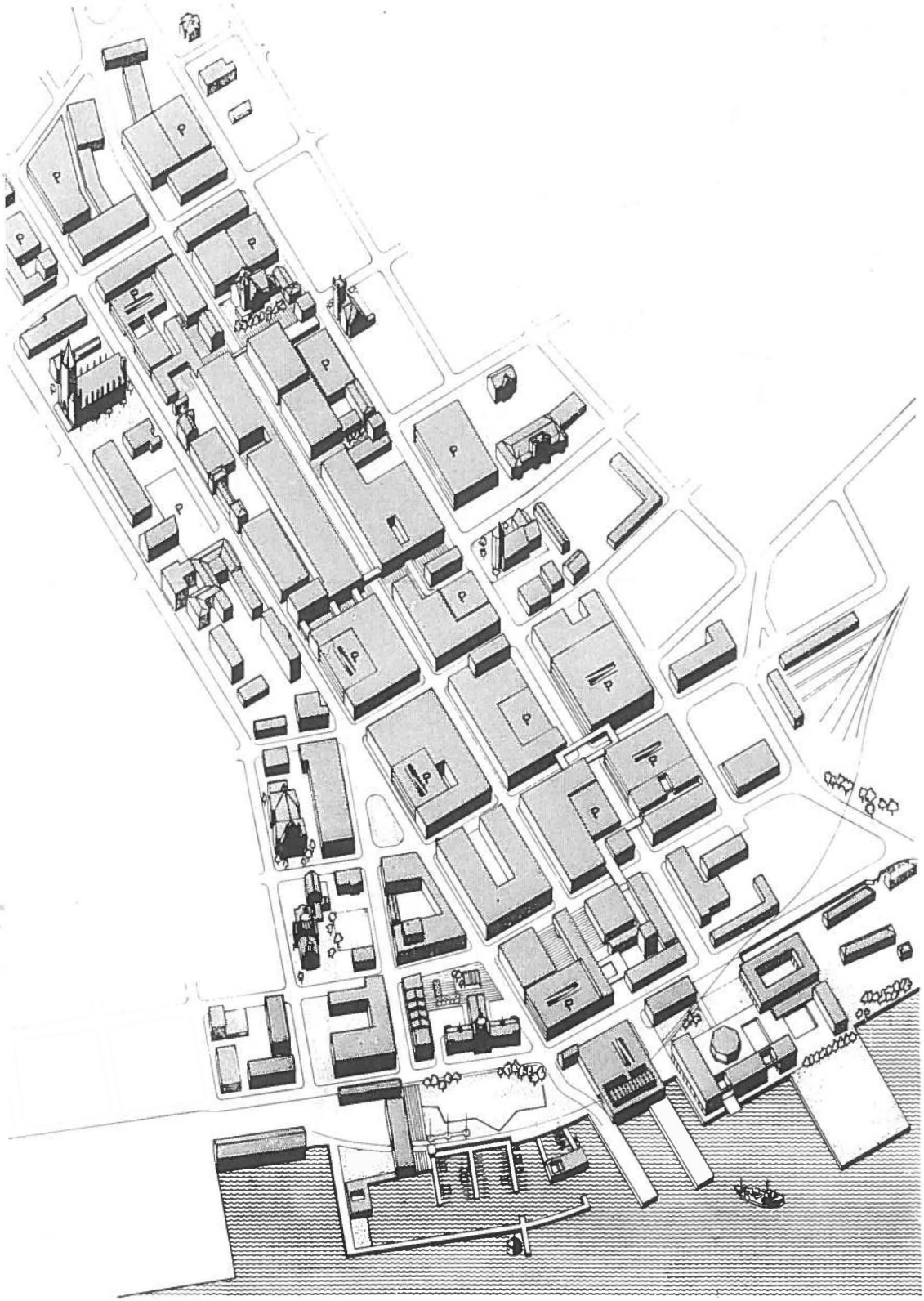
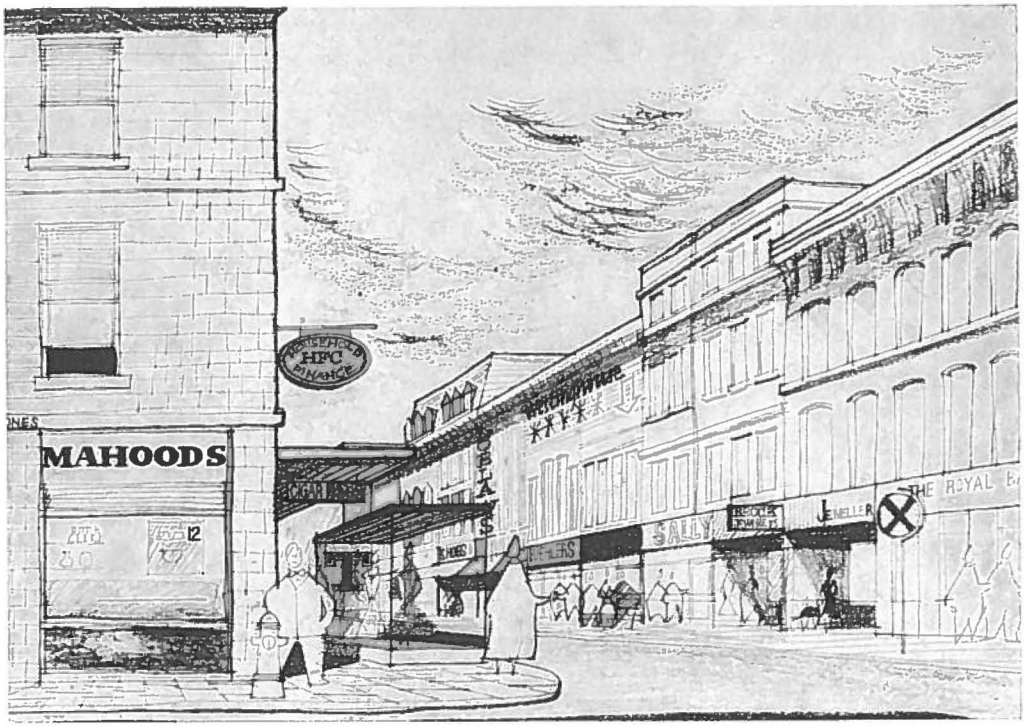
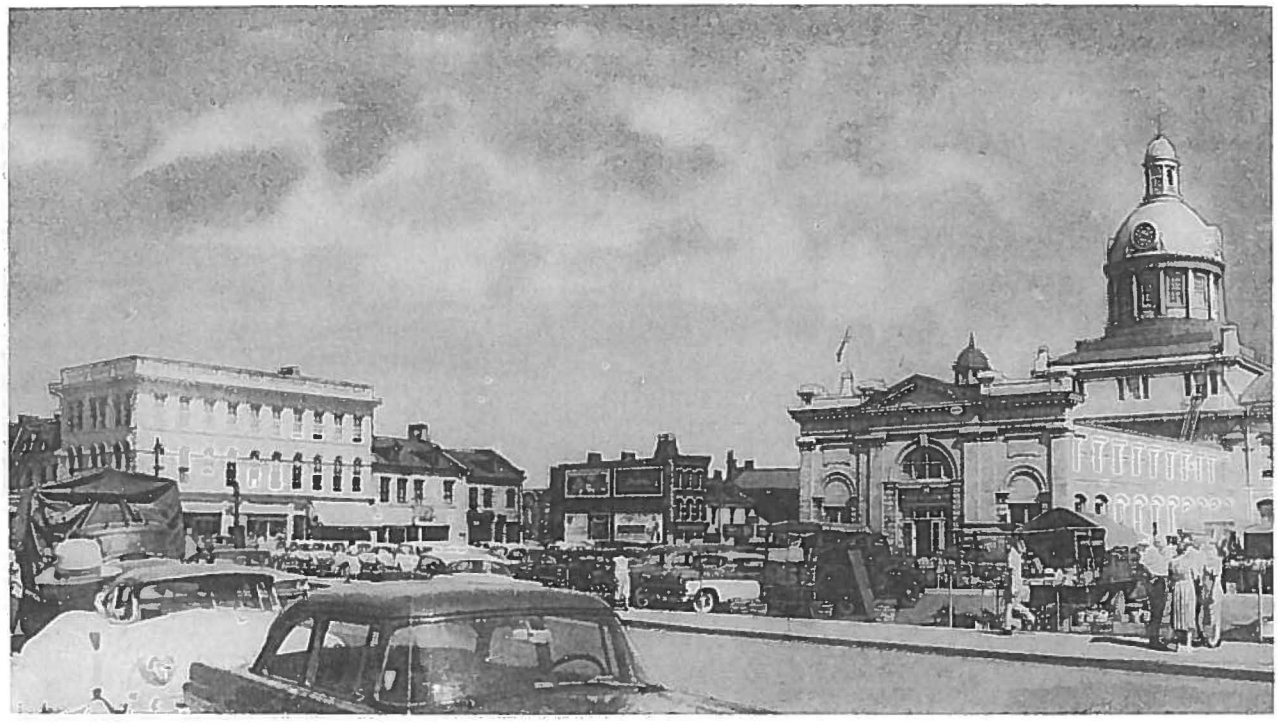


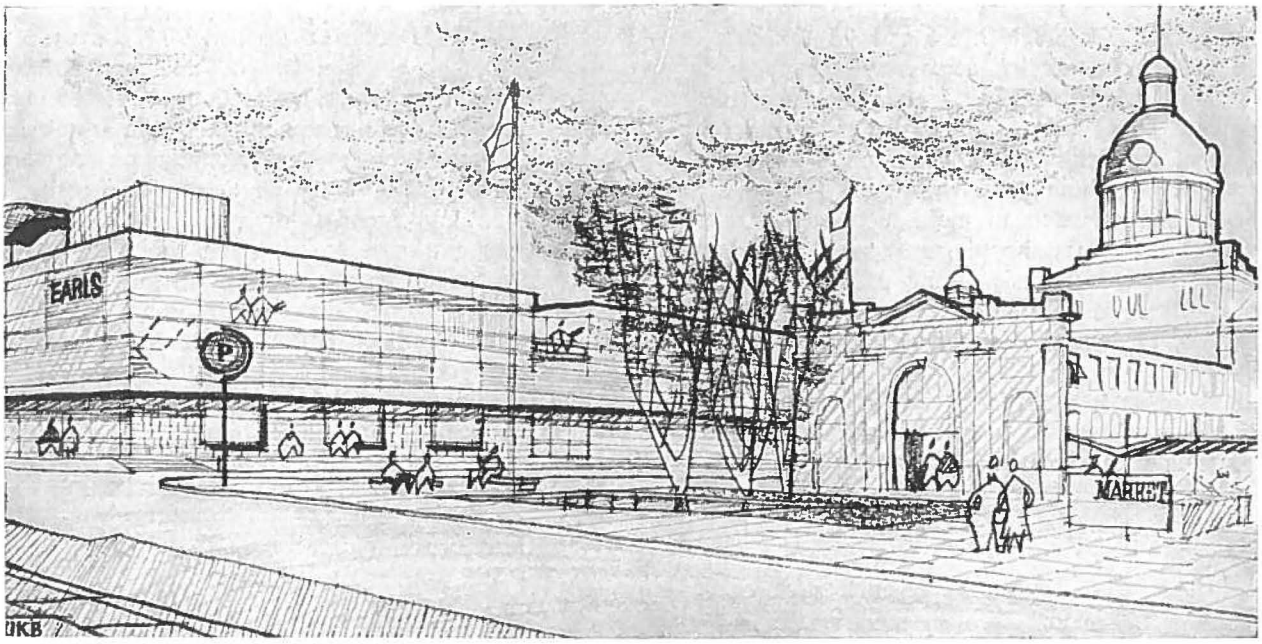
ILLUSTRATION NO. 89 — CENTRAL AREA — DIAGRAMMATIC DEVELOPMENT PROPOSALS — CENTRAL AREA AND WATERFRONT. Source: 1958-59 Field Survey.

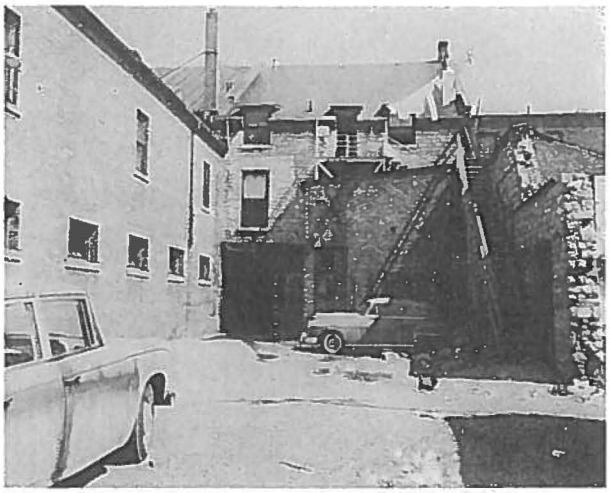


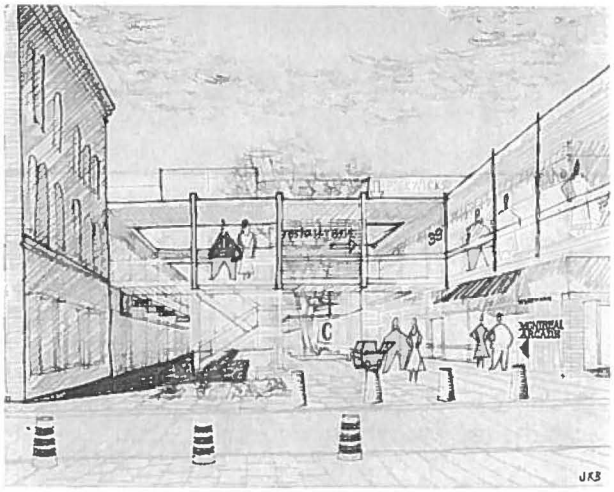
ILLUSTRATIONS NO. 90 and 91. The top picture illustrates the general lack of civic design in the main shopping area of Princess Street. Ugly and ill-coordinated street furniture, parking meters, signs at all angles and heights make a vivid contrast to the clean uncluttered appearance of most modern shopping centres. The sketch in the bottom picture is an attempt to demonstrate how this area might be made visually more attractive, providing greater shopping convenience as well as more visual delight.

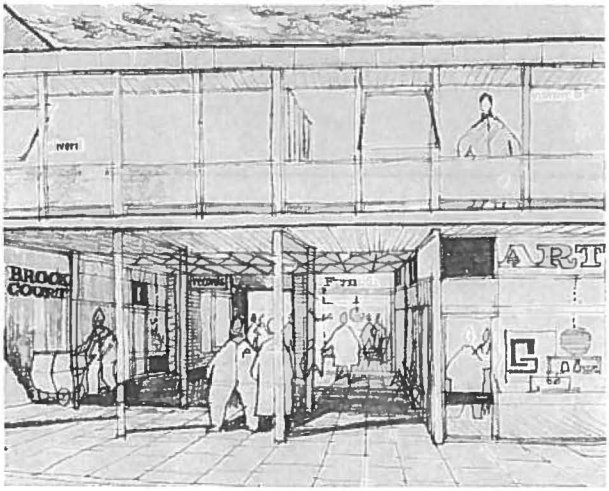


ILLUSTRATIONS NO. 92 and 93—Market Square, Existing View and Proposal. This area has always played a large part in Kingston's commercial activity although its importance has lessened over the years. It is enclosed on two sides by buildings of local character and good design, but the northern side of the Market Square is not so attractive. The block forming this side occupies a valuable site and if developed with the right uses could provide a fine adjunct to the Central Area. If alternative parking is made available, it is suggested that the Market Square be reserved for pedestrian use on non-market days. This would provide for a much livelier function than that of an automobile storage area.



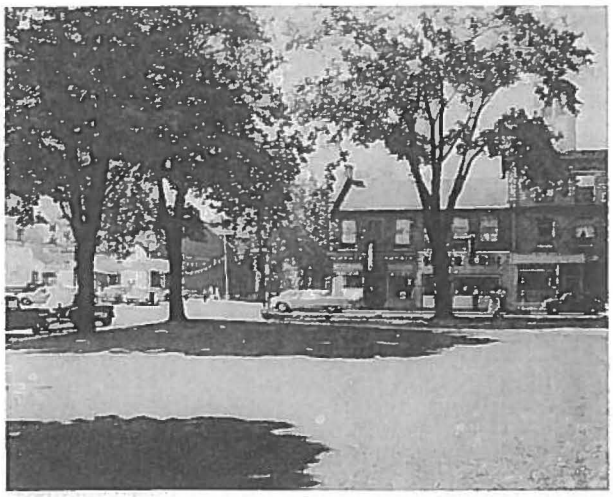


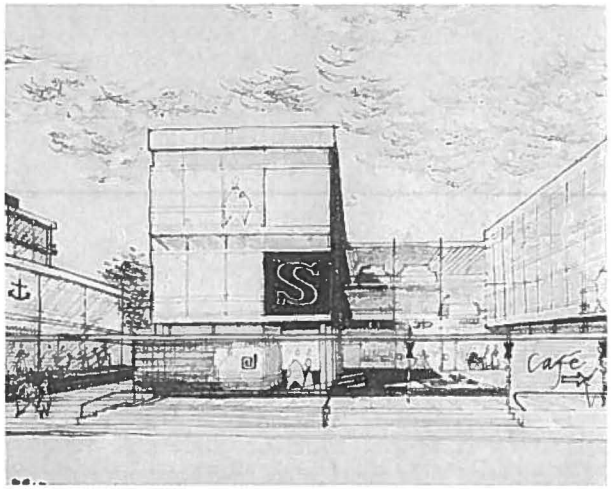




ILLUSTRATIONS NO. 94 and 95 (above).
Marginal commercial uses now occupy a large section of Montreal Street. Future commercial development could become integrated into the overall plan of the Central Area. Good office buildings are retained and buildings are replaced if they cannot easily be converted to more intensive commercial uses. A two-storey shopping area might be developed where there is already strong pedestrian use. This might become a district for a specialized trade or type of business. Pedestrian atmosphere is one of the most essential elements of a shopping centre—the freedom to cross from one shop to another, the provision of covered walks and cross-walks, and the controlled introduction of landscaping.

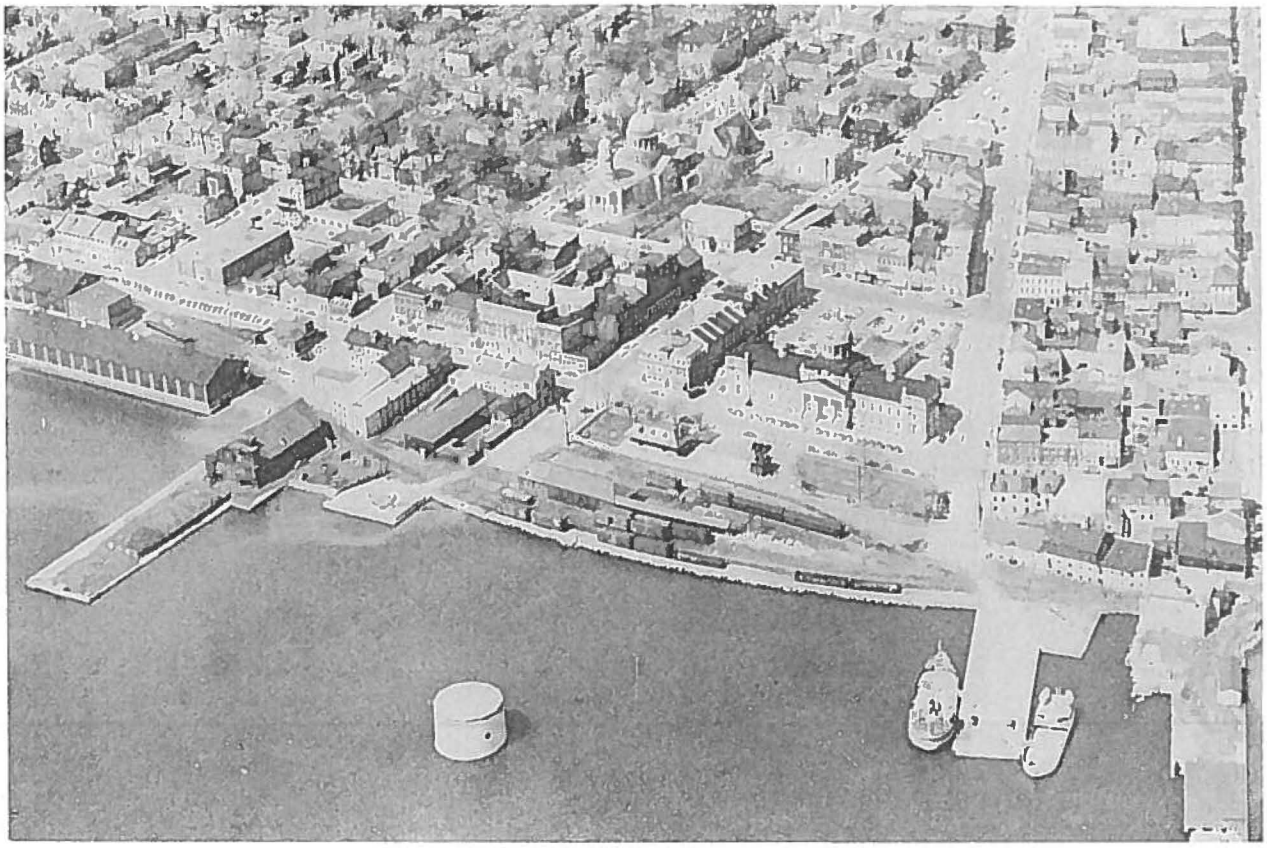
ILLUSTRATIONS NO. 96 and 97 (above).
In the blocks between Brock Street and Princess Street, direct pedestrian connections should be made from car parks to Princess Street. There are already existing connections through archways or side yards between buildings. Some of these could easily be converted into arcades for small shops to create attractive entrances to the main shopping street. Arcades are, of course, a very old idea and there are still many fine examples remaining in some of our larger North American cities. In recent years they have been re-introduced in new shopping plazas and rehabilitated central shopping areas with considerable success. With careful design and placement they can be introduced to older shopping districts.



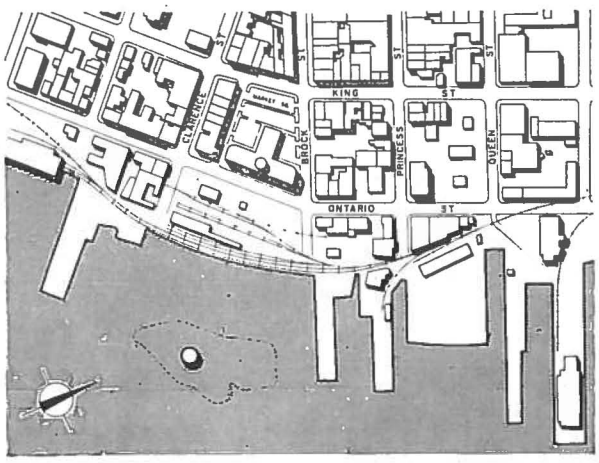


ILLUSTRATIONS NO. 98 and 99 (above).
The lawn around St. Andrew's Presbyterian Church forms a beautiful open space in the Upper Shopping Area. Within a commercial district such pleasant interruptions do much more good than harm and might attract good commercial development to such a focal point of interest. Another suggestion is that Clergy Street be closed on both sides of Princess Street between Queen Street and Brock Street, and that arcades be built on the space released. The arcades might be linked by a pedestrian bridge across Princess Street, thus completing the enclosure of the shopping precinct around the churchyard and giving it a character of its own—a statement of an urban place.

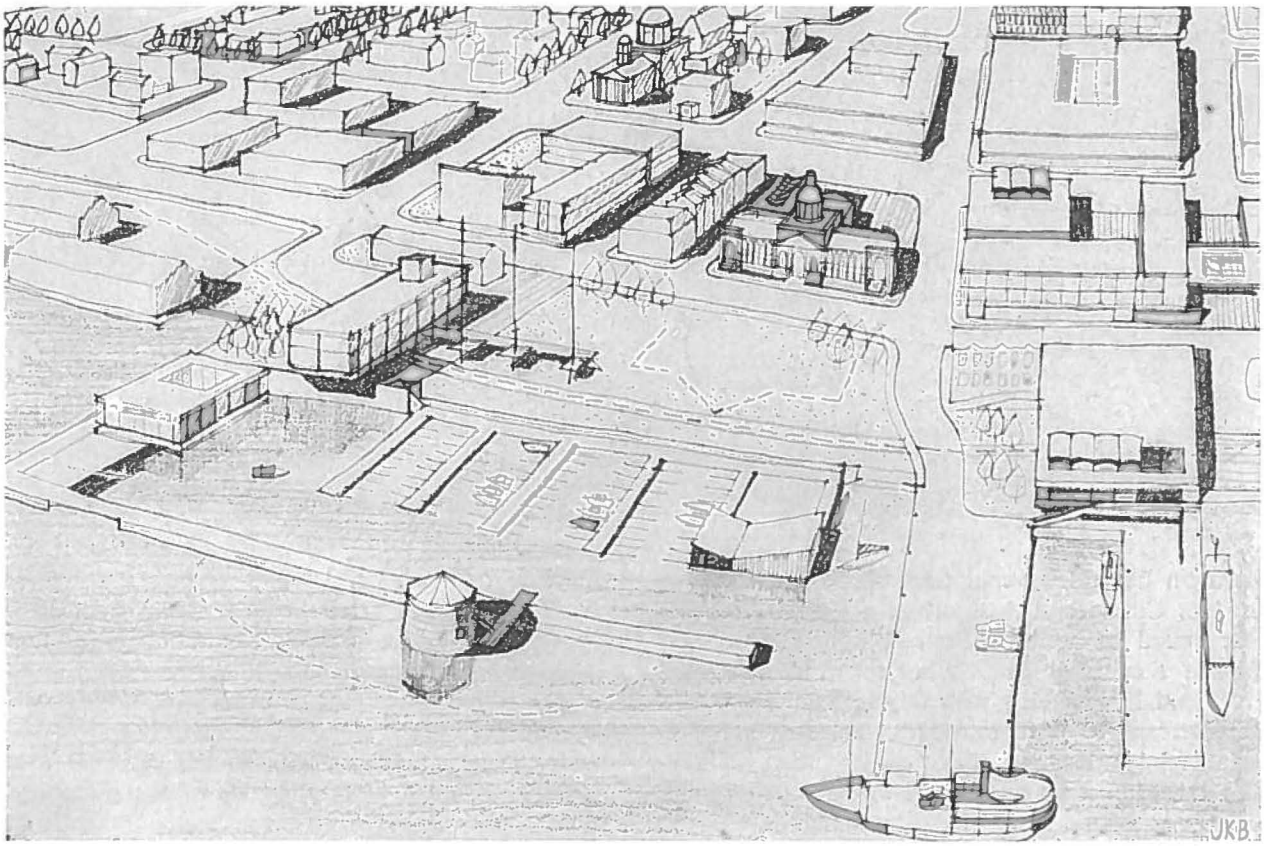
ILLUSTRATIONS NO. 100 and 101 (above).
The foot of Princess Street is an important area adjacent to the Market Square. It should be redeveloped comprehensively as a commercial area which is completely new and unified in character. It is proposed that Princess Street between King Street and Ontario Street might be closed and turned into a pedestrian mall. This presupposes the establishment of a direct connection between King Street and the LaSalle Causeway. The redevelopment of this part of the City could mark an important turning point in the history of the Central Area. Only through comprehensive measures of this kind can redevelopment be achieved on a scale which is sufficiently bold and adequate.



ILLUSTRATIONS NO. 102 and 103. THE WATERFRONT TO-DAY. The above photograph should be compared with the panoramic view of 1875 on page 4. In the days when Kingston's shipping facilities were very important many of its wharves were used for commerce and the harbour was alive with boats.

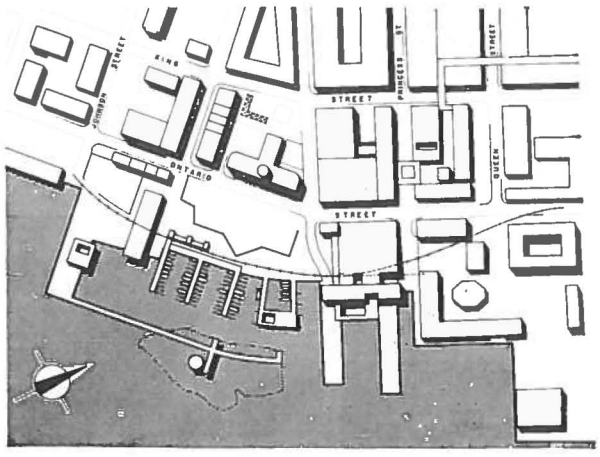


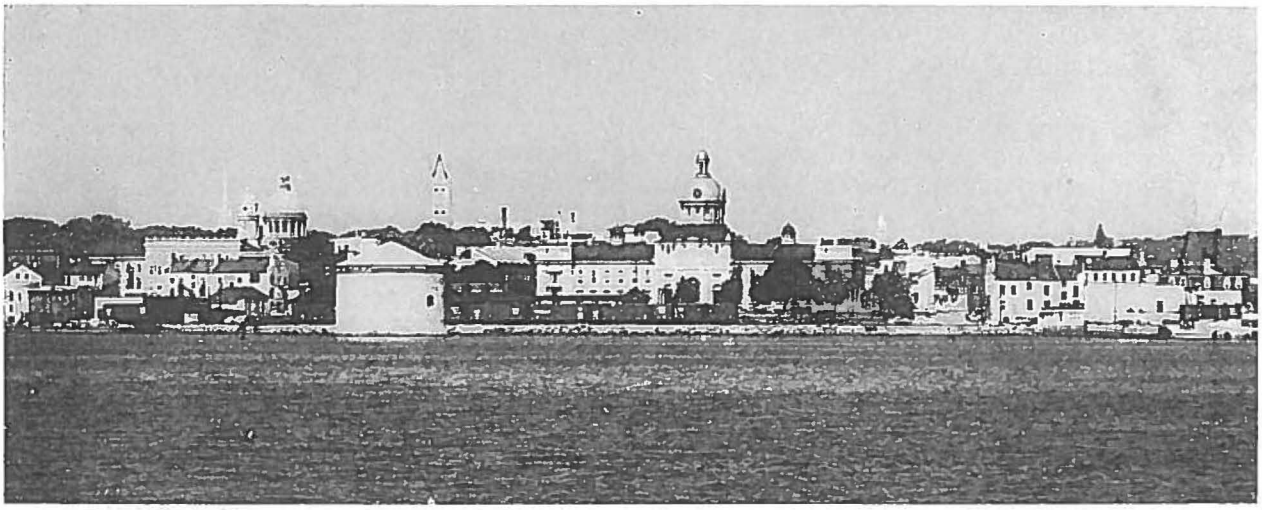
The main thought behind the scheme for the Waterfront is the revitalization of the eastern section of downtown—from the beginning the heart of Kingston. It is concerned with the most valuable natural amenity which the City possesses—its Waterfront. At present its uses vary from railway freight yards to coal storage and warehouses. In parts there is very little activity and there are many signs of decay. For over 70 years the K & P Railway, later the C.P.R., has occupied this beautiful site, overlooking the river and the Royal Military College, for freight purposes and, until recently, passenger facilities. Passenger trains will never return to the Waterfront, and it is very possible that freight could be handled with greater economy on a much more spacious site which would also contain related highway transport facilities. Such a site is available on land owned by the City in the large industrial zone between the C.P.R. line and Highway 401. The removal of the small freight yard alone would not be enough. There is a need for public action, and an overall scheme for the area is suggested. The park, which would provide an admirable setting for a restored City Hall, would form a centre for new development; enclosing it on the south side would be a block of Government offices, possibly a City Hall extension,



and the old stone warehouses converted into offices. On the northern side there might be a parking garage, a restaurant, and a club building. As the focal point, and adjacent to the attractive Shoal Tower, it is proposed to have a marina for visiting pleasure boats. Adequate facilities could be provided, and it is fairly certain that, if they were, a large proportion of the many boats, that pass by Kingston in going up the Rideau or to the Thousand Islands, would stop and there would be a stimulus to downtown business. An outer breakwater would constitute the main expense of the marina project, but this could partially be constructed on the shoal on which the martello tower stands, and the complete scheme could be increased in capacity annually to reduce initial costs. A later development, almost essential within an overall scheme, could be the reclamation of the wharf at the bottom of Johnson Street—a perfect site to complement the marina, with an attractive restaurant overhanging the water. It could be shielded from the locomotive plant by planting. The buildings on the Waterfront could provide a lively centre for social activities during the evenings, and the inter-mixture of office and other buildings would help the area to be alive throughout the day. In addition, extensive civic facilities are indi-

ILLUSTRATIONS NO. 104 and 105. PROPOSED WATERFRONT IMPROVEMENT. The sketch and diagram suggest how the waterfront could be improved—not for commercial shipping but for the rapidly increasing use of pleasure craft. The railway yards have been removed and the City Hall park restored. A marina has been established on the shore line protected by a sea wall based on the Shoal Tower

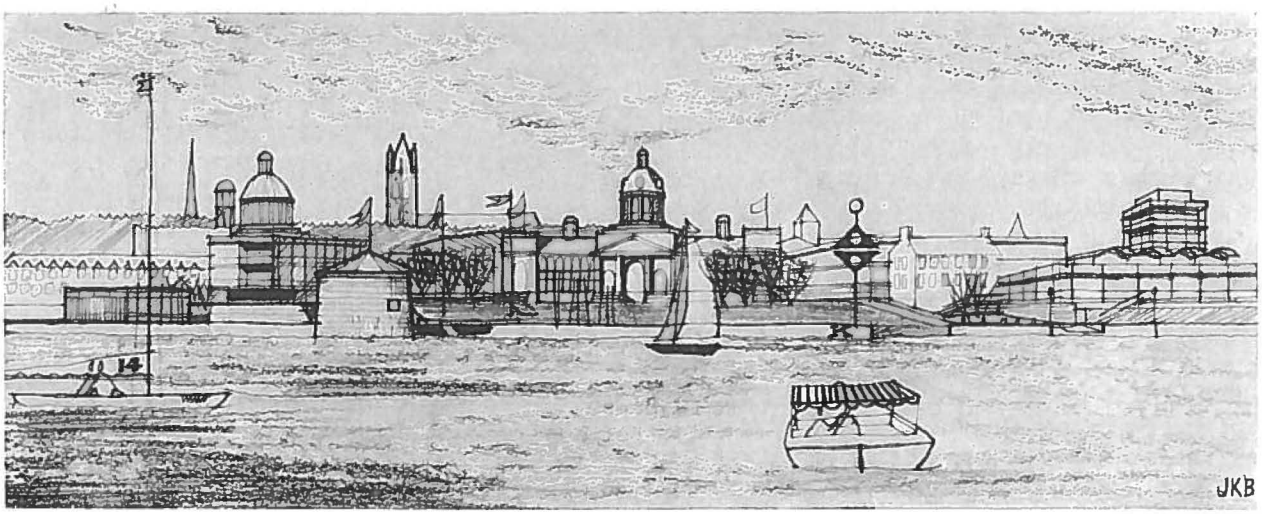




cated on Crawford's coal dock. Such buildings as an Arts Centre and Auditorium are envisaged for year round as well as Festival use. The former Canada Steamship Line Wharves would also be developed in sympathy with this scheme if a park-like atmosphere were introduced amongst suitable commercial extensions. The earlier heart of the City, the Market Square, is still used for its original purpose on Tuesdays, Thursdays, and Saturdays. Its use should be maintained and that section to the west of the Police Department wing should be made pedestrian. This will make possible a much more attractive setting for the City Hall on King Street. Special emphasis has been placed in the Plan on the needs of pedestrians who have had to suffer many inconveniences as the needs of the cars have triumphed. The principle adopted is that there should be more pedestrian space and at the same time more car parks closely related to the traffic arteries.

ILLUSTRATION NO. 106 (above) — THE WATERFRONT TO-DAY. The view from Point Frederick. The City's many domed buildings form an arresting skyline, but the Waterfront itself is not of the same quality. At present what should be a magnificent vista is blocked by unsightly freight cars and railway sheds. An opportunity presents itself for opening up at least a section of the Waterfront to form a square with buildings looking towards the Island.

ILLUSTRATION NO. 107 (below)—PROPOSED WATERFRONT IMPROVEMENT. The sketch repeats, at an eye level view, the proposals suggested in the aerial view on the preceding page. In addition to the marina it is suggested that an improved waterfront would provide an ideal location for various civic and commercial uses.



APPENDICES

Central Area Parking

In 1955 there were 10,600 cars in the City, which had a population of 47,600. The number of cars expressed as a percentage of population was approximately 21.5%. In 20 years the proportion is likely to be at least 30% of the population. As the city-region grows, a lower percentage of the population may visit the Central Area. But there are two other factors to be taken into account. In 20 years the population of the city-region may be 120,000, and, instead of 13,500 cars there may be 36,000. At present there are 2,150 car spaces in the Central Area. Assuming a proportionate decline in users from 16% to 12%, there will be a need for at least 4,300 parking spaces by 1980. Of this number there should be about 4,100 off-street parking spaces, as Brock, Queen, Princess, Barrie, Wellington, King, and Ontario Streets are freed of parked vehicles. In the Central Area proposals, approximately 600,000 square feet of parking space is shown, which is about enough for 1,500 cars at ground level or 1,250 per storey in ramp garages. In addition about 400 other spaces already in use are retained. In twenty years provisions might be existing off-street spaces retained; 3,750 spaces in as follows: 200 spaces metered on streets; 400 3 storey ramp garages.

Altogether over the 20 year period, 915 parking spaces on the street will require replacement, and 660 off-street parking spaces will be absorbed within the new parking lots. The lots that exist will have to be redesigned to allow a comprehensive layout related to servicing areas.

About 600,000 square feet has been proposed for parking areas, and this would allow approximately 1,500 cars on one-level parking and 1,250 cars per floor on multi-level parking. Only about half of this area would be available within the next 5 years.

For example, by 1964, 400 street parking spaces and 160 off-street spaces might be eliminated. The spaces remaining would be 2150 minus 560 = approximately 1,600. The parking requirement in 1964 would be approximately 2,600. The spaces required will, therefore, be 1,000. These could be obtained either by buying two thirds of the land proposed or by building ramp garages at an early stage.

TABLE XIV

CENTRAL AREA — PARKING SURVEY

DECEMBER, 1958

Block No.	*On-Street Metered Parking*	*Extra On-Street*	*Off-Street In Use*	*Possible Parking*	*In Use*
98	18	1*	34	52	53
99	23	—	16	39	39
100	26	—	23	49	49
101	31	—	20	51	51
102	32	1*	33	69	36
103	41	5	45	91	91
104	24	12	22	58	58
105	3	8	80	91	91
108	12	2	56	68	70
109	30	—	31	89	61
110	43	—	69	112	112
111	52	—	33	97	85
112	55	1*	13	68	69
113	46	—	18	64	64
114	7	21	69	97	97
115	—	12	6	18	18
116	—	12	8	22	22
140	24	2*	20	44	46
141	49	—	27	76	76
142	80	—	62 (met.) 17	159	150
89	18	20	27	65	65
93	—	13	20 (met.	108	33
95	29	6	33	68	68
96	—	37	30	87	67
97	5	11	41	57	57
146	20	43	11	74	74
145	10	18	9	37	37
149	—	5	25	30	30
94	—	14	2	16	16
West	7	—	13	20	20
North	7	91	7	105	105
South	49	27	10	86	86
Total	744	360	936	2,167	1,996

Residential Zoning

The Residential zoning at present in force appears to be somewhat rigid and too exclusive. Two-family houses and row housing do not necessarily constitute a nuisance in themselves, and it is doubtful if they should be in a specific zone or area of their own. It would appear that apartment houses can be a nuisance, and they tend to decrease the values of adjoining houses unless they are on sites which are attractively landscaped and spacious.

Controls should probably define: (a) minimum lot area; (b) arrangement of units (i.e., 2 family, 3 family, etc.; (c) type of accommodation (number of bedrooms, etc.); (d) lot occupancy (i.e. percentage of site occupied).

It would appear best that controls should relate to the type of housing unit, particularly as regards lot area, rather than to a zone as at present. There could then be a universal control for minimum standards in (i) row housing, (ii) apartments, (iii) single family housing. Although zoning is designed in part to uphold property values, it is in practice evident that social groups generally assure this once a certain type of development is established in an area.

Front Yards.

Front yards should bear a certain relationship to the street right-of-way, which varies according to the function of the road. The minimum required on some streets could be 10 feet (e.g. in the Old Sydenham Ward) and on others 25 feet.

Side Yards.

Where there is no requirement for light and air, houses might meet at party walls, but normally minimum side yards would allow an adequate passage along the flank of the house. Side yards at corners should be related to the street width and right-of-way to ensure correct sight lines for drivers.

Rear Yards.

Rear yards should allow sufficient light, air and privacy, and should relate to building height. A minimum of 20 feet for single storey buildings, and 30 feet for two storey, should be coupled with minimum back to back requirements for 40 feet and 60 feet respectively.

Where a single ownership scheme is developed by a registered architect for a number of buildings, some or all of the requirements could be relaxed if the design would benefit by the relaxation.

City Zoning.

In general terms, zoning details within the City should vary according to location and the desired type of residence. There might be three kinds of area: (i) inner urban, mainly with conversions and new apartments; (ii) outer urban area, generally consolidating existing uses; (iii) suburban area, a range of new residential dwellings.

At present, the City is under two main zoning by-laws. One by-law applies to the areas annexed in 1952, the other to the pre-annexation area known as the Old City. This latter by-law has been in force since 1942. Kingston was ahead of many other Canadian cities in adopting a zoning by-law but the zoning was not related to a comprehensive plan of development. This deficiency can now be remedied but it is clear that the by-law also needs considerable revision to bring it into line with modern concepts of community planning. It would be desirable at the same time to consolidate the two by-laws so that there shall be one by-law for the entire City.

Housing Code

It is most strongly recommended that the City Council should adopt and enforce a Housing Code in order to prevent the exploitation and deterioration of older houses, and to correct a general spread of blight. Conservation is more economical, and more satisfactory in human terms, than the running down and subsequent clearance of areas.

Clauses in a Housing Code should include provisions concerning:

1. The space around and adjoining buildings.
2. Structure—Exterior.
3. Structure—Interior.
4. Basic facilities (i.e. plumbing, heating, etc.).
5. Installation and maintenance of basic facilities.
6. Occupancy (persons in relation to rooms and room sizes).
7. Light and ventilation.
8. Responsibilities of owners and occupants.
9. Enforcement.

In more detail, the provisions should require that:

(a) Exterior property areas, and the access area should be free from conditions which might create a health, accident, or fire hazard.

(b) The structure should be: in good repair, waterproof, and structurally sound; with a protective coat on the wood surfaces; vermin and rodent free; and free from loose overhanging objects.

(c) The interior should be: free from dampness; structurally sound; clean, sanitary and safe; free from fire hazards; and have special requirements for basement accommodation.

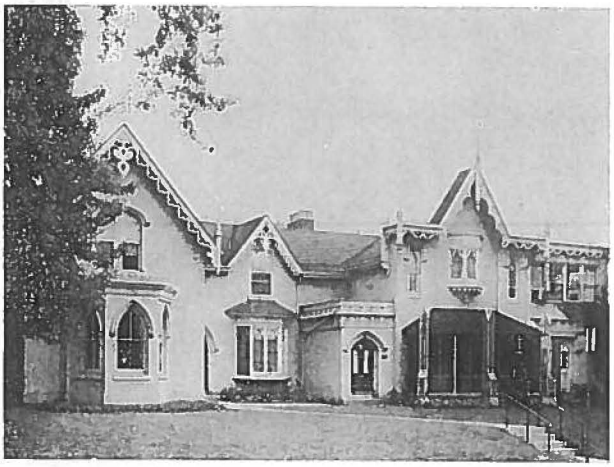
(d) There should be a: potable water supply; hot water supply; kitchen sink, and/or lavatory basin; toilet; bath-tub or shower. Each facility to be used by not more than ten persons.
(e) There should be sewer connections, and no privies.
(f) The heating should ensure an interior temperature of 70 degrees F. from September 15 to May 15.
(g) The electrical wiring should be in good condition and not overloaded.
(h) The minimum ceiling height is 7 feet over 50% of the floor area in any room (area where height is less than 5 feet not considered).
(i) Sleeping rooms should have at least 60 sq. ft. of floor space for 1 occupant; 50 sq. ft. for each occupant if 2 or more per room, with a minimum width of 7 ft. per person.
(j) There should be not more than 1.5 persons per room.
(k) Natural light—one window or skylight facing directly to the outdoors should be 10% of the floor area in size.

Administration and Enforcement

At the present the City Departments of Fire, Health, and Building Inspection each possess certain powers related to the removal of unsafe, unhealthy, and dangerous structures. It is suggested that these be combined in a special by-law containing many of the above points and administered by a Housing Standards Board, which would include chief officials. It should be given powers of enforcement. A permanent officer would carry out the work involved in maintaining and enforcing standards.

Preservation of Buildings

ILLUSTRATIONS NO. 108, 109, 110 show three examples of buildings of earlier periods which are recommended for preservation in the future. Where such houses exist in an area which is changing under pressure, some financial arrangement for their preservation may have to be made. The Committee on the Preservation of Buildings of Historical or Architectural Value has recently been formed and may in time be able to make some firm proposals along these lines.



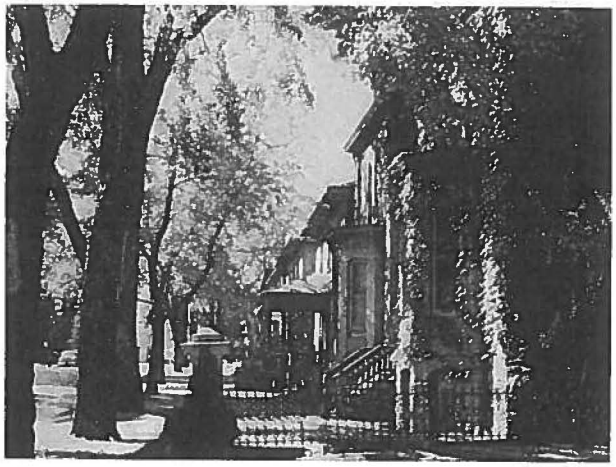


ILLUSTRATION NO. 111—MAP 20—PRESERVATION OF BUILDINGS. This Map shows buildings of historical and architectural merit recommended for preservation. It is, however, to be noted that this is not an exhaustive study but merely a preliminary attempt to show the distribution and number in the Old City.

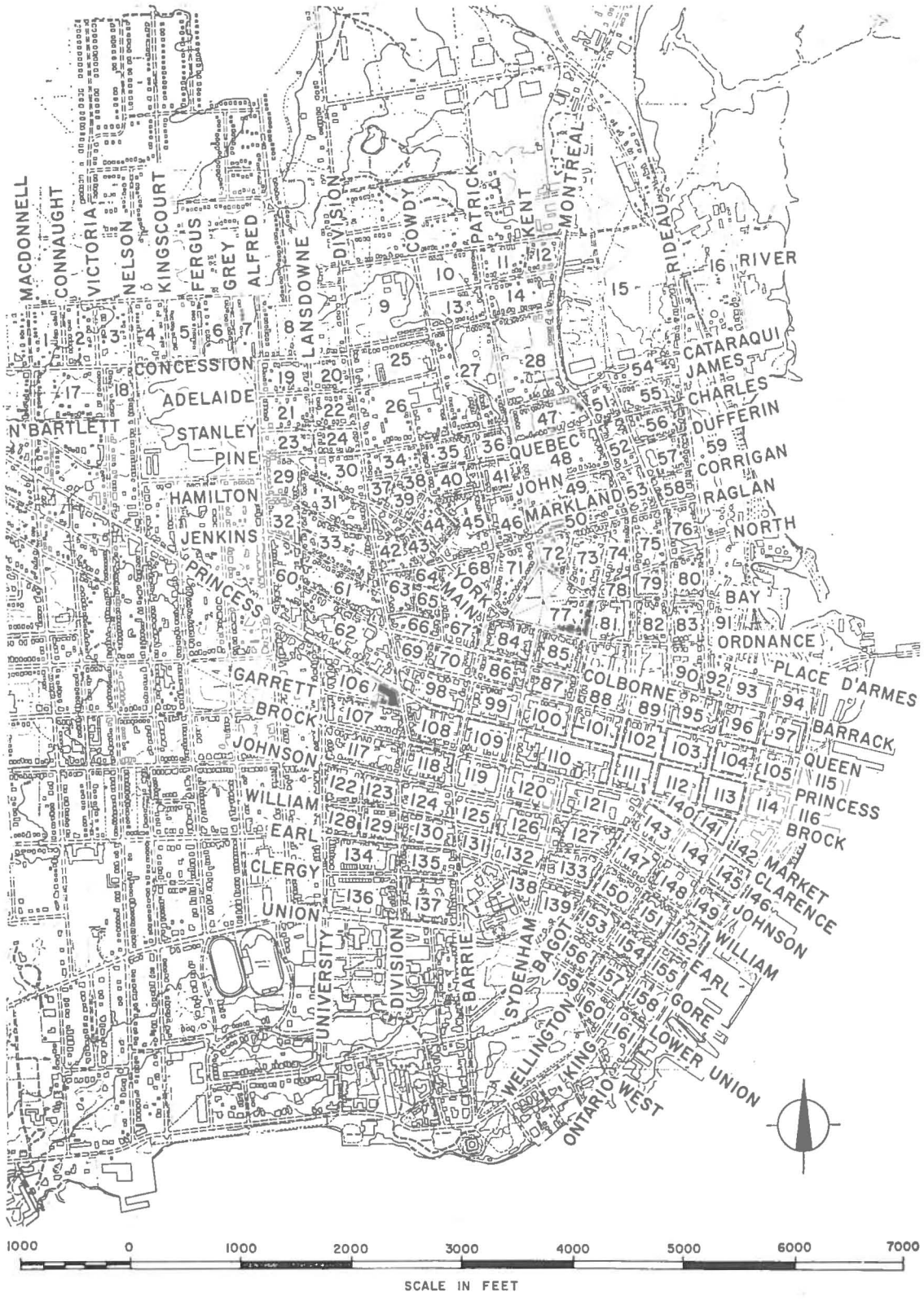


ILLUSTRATION NO. 112—MAP 21. This forms a key map of the block numbers and streets which are referred to in the Report in various sections, particularly for use in the Tables.

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